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SCIENTIFIC INFORMATION REPORT

CHINESE SCIENCE

(40)

Summary No. 5277

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SCIENTIFIC INFORMATION REPORT

Chinese Science (40)

This serial report contains unevaluated information prepared as abstracts, extracts, summaries, and translations from recent publications of the Sino-Soviet Bloc.

Abstracts represent all articles except brief notes and news items from all available issues of the Acta Sinica series, consisting of 38 separate publications. A complete list of these is included (see Table of Contents). English, Russian, or Chinese abstracts are either given in their entirety or condensed and are so identified. Whenever no abstract accompanies the Chinese text, one is prepared for this report. Brief notes and news items are prepared in the form of summaries and extracts and are presented separately in this report.

Individual items are unclassified unless otherwise indicated.

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ABSTRACTS FROM ACTAS SINICA

Biological Sciences

CH'EN Han-yuan (7115/3352/3293)

"Studies on the Staining Reaction of the Florescent Conjugate of Globulin"

Peiping, Shih-yen Sheng-wu Hsueh-pao (Acta Biologiae Experimentalis Sinica), Vol 7, No 4, Mar 62, pp 283-294

Excerpts of English Abstract: This paper deals with the staining conditions of the florescent normal protein. Gamma-globulin was prepared from rat serum by the method of ammonium sulfate precipitation (Coons, 1958) and cold alcohol fractionation (Goldstein et al., 1957). The florescent dye 1-dimethylaminonaphthalene-5-sulphonyl chloride (DNS) (Weber, 1952) or lissamine rhodamine B220 (RB200) (Chadwick et al., 1958) was used as coupling reagent. The preparations of florescent conjugates had been tested by means of paper chromatography to be free from the uncoupling dye after the purification by cold alcohol precipitation (Weber, 1953). Fresh frozen sections of the various tissues

(Continuation of Shih-yen Sheng-wu Hsueh-pao, Vol 7, No 4, pp 283-294)
were cut by the cold microtome method (cryostat). After staining with florescent globulin, the sections were examined under the florescent microscope, and the representing pictures were recorded with photomicrographic plates. The paper first discusses the conditions which effect the staining reaction of florescent globulin. Secondly, the probable effect of ion concentration was studied. Finally, the direct staining reaction of the uncoupled dye was analyzed.

SHEN Ch'ang-chia (3088/2490/1367) participated in some of the experimental work.

This paper was received for publication on 21 June 1961.

Author's Affiliation: Institute of Experimental Biology, Chinese Academy of Sciences, Shanghai.

T'IEN Po (3944/3134)
YU Ming-hsia (5713/2494/7209)
CHANG Chung-t'ao (1728/0022/3447)
T'ANG P'ei-sung (3282/0160/2646)

"The Role of Host Respiration in Tobacco Mosaic Virus Multiplication"

Peiping, Shih-yen Sheng-wu Hsueh-pao (Acta Biologiae Experimentalis Sinica), Vol 7, No 4, Mar 62, pp 299-308

Text of English Abstract: The effects of respiratory intermediates and respiratory inhibitors on the rate of multiplication of TMV in tobacco (Nicotiana tabacum) leaves were investigated with the view of elucidating the role played by the intermediate steps in host respiration on virus multiplication.

Virus multiplication was inhibited to 50.6% and 58.8% with iodoacetate and NaF, respectively, under aerobic conditions. In N_2 (with 2% O_2), the multiplication rates were, respectively, 22.2% and 56.6% of that of the control. These inhibitions were readily reversed (to 140-173%) with pyruvte, which itself promoted multiplication to 133% of the control.

(continuation of Shih-yen Sheng-wu Hsueh-pao, Vol 7, No 4, pp 299-308)

Among acids of the Krebs cycle tested, only malate and a-ketoglutarate significantly promoted virus multiplication to 146% and 129.5%, respectively, to that of the control. Malonate inhibited virus multiplication to 67.7%, and is reversed with succinate.

KCN, NaN_3, and Dieca inhibited virus multiplication to about 40.2%, 74.9%, and 74.1%, respectively. DNP, the agent known to uncouple phosphorylation, inhibited the process to 50.1% of the controls.

From these results it was concluded that glycolysis, pyruvte oxidation, terminal oxidation, and oxidative phosphorylation of host respiration all play a role in virus multiplication. It is postulated that the role of the intermediates in carbohydrate breakdown is to furnish primary (carbohydrate) building materials for virus multiplication, while the high energy phosphates (ATP) furnish the energy needed for the process. Specifically, phosphoglyceric acid, pyruvic acid, malic acid, and a-ketoglutaric acid furnish the carbohydrate parts of the raw material and ATP furnishes the energy needed for the chain of events leading up to nucleic aid and protein synthesis in virus multiplication.

(continuation of Shih-yen Sheng-wu Hsueh-pao, Vol 7, No 4, pp 299-308)
The authors express thanks to Prof LIN Ch'uan-kuang (2651/0278/0342) and Prof CHOU Chia-ch'ih (0719/1367/3589) for directing the experimental work.

This paper was received for publication on 4 August 1961.

Author's Affiliation: T'IEN, YU, and CHANG, all of Institute of Microbiology, Chinese Academy of Sciences; T'ANG, Peiping Laboratory of Plant Physiology, Chinese Academy of Sciences.

KUAN Ying-ch'ien (7070/4481/6197)
LIN K'un-lu (2651/0981/1774)
HUANG Wen-hui (7806/2429/1798)
WANG Hsiung (3769/3574)
LIU Kuei-yun (0491/2710/7189)

"Studies on the Plant Growth Substance-0072"

Peiping, Shih-yen Sheng-wu Hsueh-pao (Acta Biologiae Experimentalis Sinica), Vol 7, No 4, Mar 62, pp 310-322

Text of English Abstract: In the course of screening for new plant growth substances, we found that the culture filtrate of a Fussarium Sp. contained a factor (or factors) having physiological activities similar to IAA, gibberellin, and kinetin. This active factor (or factors) was designated as 0072.

0072 was found to give positive responses in pea test, rice seedlings test, and growth of carrot callus tissues. It also had stimulating effect on the growth of spinach (Spinacea oleracea), bean (Phaseolus vulgaris), kohlrabi (B. oleracea L. var caulorapa P.), and summer chrysanthemum (Chrysthemum coronarium L.). Both the fresh weight and dry weight of these vegetables treated with 0072 were increased.

(continuation of Shih-yen Sheng-wu Hsueh-pao, Vol 7, No 4, pp 310-322)
The principles responsible for the manifold physiological activities of 0072 could be separated by fractionation of the crude preparation. It seems probable that the active principle of 0072 contains more than one substance. Evidences obtained from the experiments on extraction characteristics, paper chromatogram behavior, and with the indole acetic acid oxidase show that 0072 was most likely a mixture of three types of growth substances resembling but not identical with IAA, gibberellin, and kinetin.

TS'AO Kuo-i (2580/0948/0308), LU Shu-sen (7120/2885/2773), CHANG T'ing-lan (1728/1656/5695), HSU Mei-ying (1776/2734/5391), FAN Ts'ui-yun (4636/5050/5366), LIN Tzu-shih (2651/5261/2508), CH'EN Ch'ang-ch'ing (7115/7022/3237), and FENG Chi-li (7458/1569/4539) participated in the work.

This paper was received for publication on 16 October 1961.

Authors' Affiliation: All of Laboratory of Phytohormones, Institute of Plant Physiology, Chinese Academy of Sciences.

HO Shih-wei (5012/1102/5517)
LIN K'un-lu (2651/0981/1774)

"Studies on the Physiological Actions of the Gibberellins: IV. The Effect of Gibberellin on the Absorption of Nitrogen and Phosphorus^{32} by Plants"

Peiping, Shih-yen Sheng-wu Hsueh-pao (Acta Biologiae Experimentalis Sinica), Vol 7, No 4, Mar 62, pp 323-327

Text of English Abstract: The results of the present work show that the absorption of nitrate by the seven plants used was not affected by the treatment of gibberellin of the plants. However, by employing the technique of an isotope P^{32}, the influence of gibberellin upon the absorption of phosphorus by soy bean plants was apparent. The absorption curve obtained in this experiment was essentially similar to the growth rate curve and the respiration curve in Part I and Part III, respectively, of this series of reports.

The authors express thanks to HUANG Wen-hui (7806/2429/1798) and CHANG Cheng-fu (1728/2973/4395) for assisting with the work and to Prof NI Chin-shan (0242/2516/1472) and WU Shao-po (0702/1421/0130) for arranging and carrying out four nitrogen absorption experiments.

(continuation of Shih-yen Sheng-wu Hsueh-pao, Vol 7, No 4, pp 323-327)
This paper was received for publication on 22 November 1961.

Authors' Affiliation: Both of Laboratory of Phytohormones, Institute of Plant Physiology, Chinese Academy of Sciences, Shanghai.

CH'EN Han-yuan (7115/3352/3293)
KU Kuo-yen (7357/0948/1750)
CH'EN Jui-ming (7115/3843/6900)

"Comparative Studies on the Antigens of Three Cytoplasmic Fractions From the Hepatoma and Liver of Rats: I. Complement Fixation Test"

Peiping, Shih-yen Sheng-wu Hsueh-pao (Acta Biologiae Experimentalis Sinica), Vol 7, No 4, Mar 62, pp 329-338

Excerpts of English Abstract: This paper deals with the antigenic difference between tumor and normal tissues. The materials used in this report were the rat hepatoma induced with acetylaminoflourene and normal rat liver tissue. Antigens from both tissues were prepared by fractionating the homogenates into three fractions, i.e., supernatant, microsome, and mitochondria according to Hogeboom et al. (1948). The antisera were obtained from rabbits previously treated with intervenous injections of antigens. The results of the complement fixation reactions indicated that the difference between tumor and liver antigens was obvious, but among the three cytoplasmic fractions, the situations were not the same. The complexity of tissue antigens, the formation of antibody, and the mechanism of antigen-antibody reactions

(continuation of Shih-yen Sheng-wu Hsueh-pao, Vol 7, No 4, pp 329-338) were discussed in connection with the limitation of the technique of complement fixation reaction for the analysis of antigenic difference between tumor and normal tissues.

The authors express thanks to Prof LIN Fei-ch'ing (2651/7378/0615) of Microbiology Teaching and Research Section, Shanghai First Medical College, for his technical direction and to Prof YAO Hsin (1202/9515) for reviewing the paper. WANG Chin-lan (3769/6930/5695), WANG Chueh (3769/3778), TS'AI Kuan-ken (5591/7070/2704), WANG Ch'iu-ta (3769/3808/6671), and CHIANG Tzu-ch'ing (3068/1311/0615) participated in the experimental and technical work.

This paper was received for publication on 4 December 1961.

Authors' Affiliation: All of Institute of Experimental Biology, Chinese Academy of Sciences, Shanghai.

KU Kuo-yen (7357/0948/1750)
CH'EN Han-yuan (7115/3352/3293)
CH'EN Jui-ming (7115/3843/6900)

"Comparative Studies on the Antigens of Three Cytoplasmic Fractions From the Hepatoma and Liver of Rats: II. Anaphylaxis With Desensitization"

Peiping, Shih-yen Sheng-wu Hsueh-pao (Acta Biologiae Experimentalis Sinica), Vol 7, No 4, Mar 62, pp 342-350

Excerpts of English Abstract: This paper studies the antigens of hepatoma fractions by the method of anaphylaxis with desensitization. In the experimental groups, guinea pigs were separately sensitized with the three different fractions of tumor, and 48 days later, the animals received injections of the corresponding fractions of liver, in increasing amounts as desensitization agents, followed by tumor fractions as challenge injections. In control group 1, the procedure was carried out as above, except that the liver antigens were used as sensitizating agents instead of tumor. In control group 2, the animals received antigens only once after sucrose injections. It is concluded that the anaphylactic reaction of guinea pigs at challenge injection of

(continuation of Shih-yen Sheng-wu Hsueh-pao, Vol 7, No 4, pp 342-350) the supernatant fraction of rats hepatoma might be due either to the presence of specific tumor antigens or to the common antigens which were more in tumor than in liver.

The authors express thanks to Prof YAO Hsin (1202/9515) for reviewing the paper; WANG Ch'iu-ta (3769/3808/6671), TS'AI Kuan-ken (5591/7070/2704), CHIANG Tzu-ch'ing (3068/1311/0615), WANG Chueh (3769/3778), and KO Hsi-jui (5514/6932/6904) participated in the experimental and technical work.

This paper was received for publication on 4 December 1961.

Authors' Affiliation: All of Institute of Experimental Biology, Chinese Academy of Sciences, Shanghai.

KU Kuo-yen (7357/0948/1750)
WANG Ch'iu-ta (3769/3808/6671)

"Comparative Studies on the Antigens of Three Cytoplasmic Fractions From the Hepatoma and Liver of Rats: III. Agar-Diffusion Tests With Special Reference to the Purification of Antigens"

Peiping, Shih-yen Sheng-wu Hsueh-pao (Acta Biologiae Experimentalis Sinica), Vol 7, No 4, Mar 62, pp 353-366

Excerpts of English Abstract: It has been demonstrated that there are antigenic differences between hepatoma and liver of rats. To identify the antigens responsible for such differences, the method of agar-diffusion, which permits the analysis of several antigen-antibody systems in one reaction and the demonstration of identical and non-identical antigens in different tissues, was employed. Three experiments were described as follows: (1) comparisons of antigenic compositions of homologous fractions of hepatoma and liver; (2) the isolation of the "gained" antigens of hepatoma and the liver antigens which cannot be revealed in tumor; (3) comparisons of the antigens among different fractions of the same tissues. Two additional experiments were carried out as follows: (1) The relationship between the precipitation

(continuation of Shih-yen Sheng-wu Hsueh-pao, Vol 7, No 4, pp 353-366)
line and titer of complement fixation of anti-liver fraction sera; (2) comparisons of the freshly prepared fractions of liver and those stored at -20° C for 9 months.

The authors express thanks to Prof CH'EN Jui-ming (7115/3843/6900) and Prof YAO Hsin (1202/9515) for reviewing the paper; to CHIANG Tzu-ch'ing (3068/1311/0615) for selecting the photographs; and to SHUN Yun-te (7311/7189/1795), Shanghai People's Technical Photography Studio, for technical guidance.

This paper was received for publication on 4 December 1961.

Authors' Affiliation: Both of Institute of Experimental Biology, Chinese Academy of Sciences, Shanghai.

WU Jung (0702/5816)

"Studies on the Cytogenetics of the Different Types of Philosamia Cynthia Ricini and Their Hybrids With Philosamia Cyntia Walkeri"

Peiping, Shih-yen Sheng-wu Hsueh-pao (Acta Biologia Experimentalis Sinica), Vol 7, No 4, Mar 62, pp 371-383

Text of English Abstract: According to the differences in the larval skin colors, presence or absence of black spots on the cuticle, and the colors of the blood, Philosamia cynthia ricini may be distinguished into several different types. As a result of the crosses of the five different types of P. c. ricini, it was found that the blue skin is dominant over the white skin; black spots on the cuticle dominant over the absence of the black spots; and the yellow blood P. c. ricini appear to be governed by three different pairs of genes, each of which is apparently located on a separated chromosome. Hence, in F_2 and the backcrosses, the recombinations of these three pairs of genes give to eight different types of larval skins in due proportions. Philosamia cynthia Walkeri, another subspecies of P. cynthia, is a kind of wild silkworm. There are several characters which distinguish P. c. Walkeri from P. c. ricini. From the results of the crosses of P. c.

(continuation of Shih-yen Sheng-wu Hsueh-pao, Vol 7, No 4, pp 371-383)
Walkeri and P. c. ricini, it was found that the green skin of P. c. Walkeri is dominant over the blue and white skin of P. c. ricini; the small spots on the cuticle of P. c. Walkeri, dominant over the absence of the black spots of P. c. ricini; but the small spots on the cuticle of P. c. Walkeri is recessive to the large spots on the cuticle of P. c. ricini. The cocoon color of P. c. Walkeri is greyish yellow; and that of P. c. ricini is white; but the F_1 hybrids between them show a brownish red color, and the F_2 give cocoons with a variety of colorations varying in a continuous fashion. When the F_1 individuals were backcrossed to P. c. ricini, the cocoon colors segregated in a ratio of 1:1, which suggests that the difference in cocoon color between P. c. Walkeri and P. c. ricini seems to be controlled by one pair of genes. When the gene blue skin is combined with the gene yellow blood, the skin color of larvae appears to be green. When the gene white skin is combined with the gene yellow blood, the skin color of larvae appears to be yellow. The pupae of F_1 and F_2 did not diapause.

Cytological examinations show that the diploid chromosome number of P. c. ricini is 28 and that of P. c. Walkeri is 26. In the primary spermatocyte of F_1 of the cross P. c. Walkeri x P. c. ricini, 12 bivalent and one trivalent chromosomes were observed. This suggests

(continuation of Shih-yen Sheng-wu Hsueh-pao, Vol 7, No 4, pp 371-383)
that in the course of evolution of P. c. ricini from the related wild, P. c. Walkeri, one pair of chromosomes in the latter could have been separated into two pairs of chromosomes in the former. An additive evidence in favor of the above suggestion is the fact that whereas the chromosome number of P. c. Walkeri collected from Shanghai, Shantung, or Liaoning is 26, at least one geographical strain of P. c. Walkeri collected from Wenchow, Chekiang Province, shows 28 chromosomes, among which 2 are distinctly smaller than the rest.

This paper is part of the author's graduate thesis under the direction of Prof LIU Tsu-tung (0491/4371/3159).

This paper was received for publication on 9 December 1961.

Author's Affiliation: Institute of Genetics, Futan University, Shanghai.

T'AN Chia-chen (6151/1367/2823)
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LEI Chao-tsu (7191/5128/4371)
HSUEH Ching-lun (5641/0079/0243)

"The Effect of Different Dosages of Gamma-radiation on the Chromosome Aberrations in the Spermatogenesis of the Rhesus Monkey, Macaca Mulatta"

Peiping, Shih-yen Sheng-wu Hsueh-pao (Acta Biologiae Experimentalis Sinica), Vol 7, No 4, Mar 62, pp 386-396

Text of English Abstract: The testes of nine different monkeys were each separately exposed to a different dosage of gamma-radiation (Co^{60}), ranging from 5r, 10r, 25r, 50r, 200r, 300r, to 400r, using one testis from each monkey precastrated to serve as the controls. Statistical treatments of the data obtained show that dosages below 50r give no pronounced effect to the increase in the frequencies of chromosome aberrations as compared to those of the controls, and the dosages above 50r up to 400r clearly indicate an exponential relation-

(continuation of Shih-yen Sheng-wu Hsueh-pao, Vol 7, No 4, pp 386-396)
ship with frequency of chromosome aberrations. Though such relationship has been established previously in Drosophila and Tradescantia, this is as yet the first time reported in such high mammals as monkeys, suggesting that the regularity between radiation dosages and chromosome aberrations frequencies hold true also for high mammals as much as for plants and lower animals. This information may be of value in extending the studies of genetic effects of radiations to human beings.

The frequencies of chromosome aberrations in relation to radiation dosages reported in this paper are found much below the corresponding dosage frequencies reported by Tinyakov Arsen'yeva (1958), using X-radiation, and the possible cause for such discrepancies is discussed.

This paper was received for publication on 9 December 1961.

Authors' Affiliation: All of Institute of Genetics, Futan University, Shanghai.

LIU Tsu-tung (0491/4371/3159)
HSIANG Wei (7309/4850)
WANG T'ai-ch'ing (3769/3141/3237)

"The Supernumerary Chromosome in a Population of Phlaeoba Infumata (Acrididae)"

Peiping, Shih-yen Sheng-wu Hsueh-pao (Acta Biologiae Experimentalis Sinica), Vol 7, No 4, Mar 62, pp 393-405

Text of English Abstract: In a natural population of Phlaeoba infumata found in Dachang, Shanghai, China, there was found a considerable proportion of individuals that carry one or a pair of small supernumerary chromosomes. The behavior of the supernumerary chromosomes in meiosis simulates that of an ordinary univalent in case of hemizygotes and of ordinary bivalent in case of homozygotes.

An analysis of the frequency distribution data shows that the population exhibits an equilibrium condition as expected on the basis of Hardy-Weinberg's formula. A tentative hypothesis has been worked out to interpret the data, and the various possibilities been discussed. The population is apparently in a stable equilibrium condition.

(continuation of Shih-yen Sheng-wu Hsueh-pao, Vol 7, No 4, pp 398-405)
This paper was received for publication on 9 December 1961

Authors' Affiliation: All of Institute of Genetics, Futan University, Shanghai; WANG, instructor at the Second Military Medical University.

HAO Shui (6787/3055)
FENG Su-ch'in (7458/4790/3830)
CHANG Fu-jung (1728/4395/2837)
WANG Yu-hsin (3769/3768/9515)

"Analysis of the Progress of Individual Stages of Mitosis in Vicia Faba in the First Period Following X-Ray Irradiation"

Peiping, Chih-wu Hsueh-pao (Acta Botanica Sinica), Vol 11, No 3, Sep 63, pp 207-213

Excerpts of Russian Abstract: This paper reports results of an analysis of the progress in individual stages of mitosis in the root tips of Vicia faba at different intervals following X-ray irradiation in doses of 500 roentgens: (1) The mitotic index did not differ from the control group in the 3-minute and 30-minute intervals fater irradiation; (2) the prophase rate is reduced in the 3-minute interval, while the metaphase rate is increased; (3) there was an increase in the early anaphase rate 30 minutes after irradiation; (4) the metaphase rate is lower at the 30-minute interval than that observed at the 3-minute interval; (5) the anaphase rate is reduced one hour after irradiation; (6) three hours after irradiation, the prophase rate for

(continuation of Chih-wu Hsueh-pao, Vol 11, No 3, pp 207-213)
all the counted cells does not differ from that observed one hour after irradiation. Certain assumptions concerning the causes for the increase in the prophase rate 2 to 3 hours after irradiation have been stated by other authors.

This paper was received for publication on 5 May 1963.

Authors' Affiliation: All of the Biology Department, Kirin Normal University. FENG is a teacher in refresher training at Kirin Agricultural University.

WANG Fu-hsiung (3769/0126/7160)
CH'EN Tsu-k'eng (7115/4371/6972)
LI Hsien-chang (2621/2009/4545)

"Experimental Studies of Young Ginkgo Embryos: 1. The Effect of the Bee Royal Jelly on the Embryo Growth"

Peiping, Chih-wu Hsueh-pao (Acta Botanica Sinica), Vol 11, No 3, Sep 63, pp 217-224

Text of English Abstract: Isolated young Ginkgo embryos were grown in vitro under aseptic conditions in a basic agar medium containing sucrose, mineral salts, 4 vitamins, and glycine. In one series of experiments, 3% aqueous extract of Ginkgo female gametophyte and 0.1 ppm IAA were also added. The bee royal jelly at different concentrations were tested for its effect on the differentiation and development of the young embryos. The young embryos above 1.5 mm in length with differentiated cotyledons grew normally or produced callus-like growth on the basic medium, as well as on the media with the royal jelly added. Part of the young embryos above one mm but without differentiation of cotyledons may continue their normal differentiation and development on the media containing the royal jelly, while not one embryo of the

(continuation of Chih-wu Hsueh-pao, Vol 11, No 3, pp 217-224)
same size range can grow normally on the basic medium. Young embryos below one mm usually showed little growth and died after 3 weeks of culture. The most effective concentration of bee royal jelly is about 400 ppm.

It appears that some substances which affect the normal differentiation and growth of young Ginkgo embryos are present in the bee royal jelly.

This paper was received for publication on 1 April 1963.

Authors' Affiliation: All of the Institute of Botany, Chinese Academy of Sciences.

LI Cheng-li (2621/2973/3810)
CHANG Hsin-ying (1728/2450/5391)

"Studies on the Embryos of Pinus Koraiensis Grown in Vitro: 3. Morphological Differentiation of the Root During Germination"

Peiping, Chih-wu Hsueh-pao (Acta Botanica Sinica), Vol 11, No 3, Sep 63, pp 225-237

Text of English Abstract: Root development of the intact or excised embryos of Pinus koraiensis Sieb. et Zucc. exhibited discrepant morphological differentiation under experimental conditions. That development of the root enclosed in intact megagametophyte grown in the sterile culture medium without sugar, although it showed more rapid elongation, essentially resembled that of the soil-grown seedlings. However, morphological variations existed in the root growth of the excised embryo after one week's culture. It manifested particularly in the development of the coleorhiza-like structure. As the root elongated, it first appeared as a reddish mass covering the root cap. Gradually this tissue mass became loosened and separated from the root cap. Finally it was torn and pushed aside by the elongated root.

(continuation of Chih-wu Hsueh-pao, Vol 11, No 3, pp 225-237)
In the further growth of excised embryos, seven to eight layers of loose tissue which arose from the subepidermal cells were developed around the root tip. Later, the surface layer assumed the appearance of rhizoids and was subsequently shed.

During further extension of the first root, zonation of the root apex became inconspicuous. The meristem became reduced in extent; only a layer of initial cells existed between the root cap and the hypocotyl. Meanwhile the root cap became reduced to only a few cell layers, some of which eventually degenerated.

After 6 weeks in culture, the meristematic tissues of some of the root apexes eventually became parenchymatous, and maturation of short tracheids extended up to 100-200 u from the apex. Ultimately the root ceased to elongate and became senile.

HSU Li-yun (1776/7787/0061) assisted in this experiment.

This paper was received for publication on 12 March 1963.

Authors' Affiliation: Both of the Department of Biology, Peking University.

YEN Yu-jui (0917/5148/3843)

"A New Polyploidizing Agent-Fumiren"

Peiping, Chih-wu Hsueh-pao (Acta Botanica Sinica), Vol 11, No 3, Sep 63, pp 238-251

Excerpts of English Abstract: The polyploidizing effect of fumiren has been tested for inducing autotetraploid of rice plant and rye and amphidiploid of wheat-rye hybrid. The results are summarized.

The results clearly show that for inducing autotetraploid rice plants fumiren is as good as colchicine. Fumiren has been widely used as a fungicide because it is easily accessible and inexpensive.

From fumiren treatment since 1961, the following polyploids have been obtained: one variety of rye autotetraploid, nine varieties of rice autotetraploid, and two lines of wheat-rye amphidiploid.

PAO Wen-k'uei (7637/2429/1145) directed the research; CH'ENG Ch'un-ho (4453/2504/3109) described the FU Min-nung (1381/3046/6593) method of purification.

(continuation of Chih-wu Hsueh-pao, Vol 11, No 3, pp 238-251)
This paper was received for publication on 31 May 1963.

Authors' Affiliation: Institute of Crop Breeding and Cultivation, Chinese Academy of Agricultural Sciences.

HU Yu-hsi (5170/3768/3588)
LI Cheng-li (2621/2973/3810)

"Comparative Anatomy of the Culm and Fibers of Phragmites Communis and Miscanthus Sinensis"

Peiping, Chih-wu Hsueh-pao (Acta Botanica Sinica), Vol 11, No 3, Sep 63, pp 252-260

Excerpts of English Abstract: A comparison of the internal structure of the culm and the morphological variations of the fibers in various parts of the culm between Phragmites communis Trin. and Miscanthus sinensis Anders. has been investigated and the results given.

HAN Shu-ts'ai (7281/2885/2088) and CHU Feng-ch'ih (4376/7685/3069) assisted in the research. LIU Liang (0491/0081) of the Classification Office of the Laboratory of Plant Resources identified the scientific names in the reference material.

This paper was received for publication on 8 May 1963. It was a cooperative project of the Institute of Botany, Chinese Academy of Sciences, and the Institute of Pulp and Paper Production of the Ministry

(continuation of Chih-wu Hsueh-pao, Vol 11, No 3, pp 252-260)
of Light Industry.

Authors' Affiliation: Both of the Laboratory of Plant Resources, Institute of Botany, Chinese Academy of Sciences.

TS'ENG Ch'eng-k'uei (2582/0701/1145)
CHANG Te-jui (1728/1795/3843)
CHAO Ju-ying (6392/3067/5391)

"Comparative Studies on the Influence of the Temperature Factor on the Formation and Discharge of Conchospores of Different Species of Porphyra"

Peiping, Chih-wu Hsueh-pao (Acta Botanica Sinica), Vol 11, No 3, Sep 63, pp 261-271

Excerpts of English Abstract: Comparative studies on the influence of the temperature factor on the formation and discharge of conchospores of six different species of Porphyra, namely, P. tenera Kjellm., P. subordiculata Kjellm., P. marginata Tseng et T. J. Chang, P. hemiphylla Tseng et T. J. Chang, P. shangchuanensis Tseng et T. J. Chang, and an unidentified species, were made and the results presented in the present report.

This paper was received for publication on 1 March 1963. It is report No 221 of the Institute of Oceanology, Chinese Academy of Sciences.

(continuation of Chih-wu Hsueh-pao, Vol 11, No 3, pp 261-271)
Authors' Affiliation: All of the Institute of Oceanology, Chinese Academy of Sciences.

CHU Chia-nan (2612/1367/2684)

"Cyathea Ordosica C. N. Chu, A New Cyatheoid Fern From the Jurassic of Dongsheng, The Inner Mongolia Autonomous Region"

Peiping, Chih-wu Hsueh-pao (Acta Botanica Sinica), Vol 11, No 3, Sep 63, pp 272-282

Excerpts of English Abstract: The Dongsheng fossil Cyathea ordosica sp. nov., described here, is obtained from the Jurassic coal series in the district Dongsheng (= Tungsheng, 39°53'N, 110°E), Inner Mongolia Autonomous Region. From the same bed the following plants have been found: Raphaelia diamensis Thomas, Cladophlebis whitbiensis Brongn., Taeniopteris Vittata Brongn., Nilssonia sinensis Yabe et Oishi, Podocarpites mentoukauensis Stockmans et Mathieu, and Pityophyllum sp. Besides, many other species have been observed at other spots of the same series, such as Annulariopsis simpsoni (Phillips) Harris, Clathropteris obovata Oishi, Coniopteris hymenophylloides Brongn., Czekanowskia rigida Heer, Phoenicopsis speciosa Heer, Elatocladus manchurica Yok., and Sagenopteris phillipsi (Brongn.) Presl. The geological age of the series is assigned to the Middle Jurassic by Prof J. Hsu. The diagnosis of this new fossil plant is given.

(continuation of Chih-wu Hsueh-pao, Vol 11, No 3, pp 272-282)
Prof HSU Jen (1776/0088) directed the research. CH'IN Jen-chang (4440/0088/2490) furnished invaluable opinions. CHU P'ei-ch'u (2612/1014/0796) assisted in making the slides.

This paper was received for publication on 21 June 1963.

Authors' Affiliation: Paleobotanical Laboratory, Institute of Botany, Chinese Academy of Sciences.

LI Te-hsing (2621/1795/5281)

"The Relationship Between Histamine and Hypotensive Activity in Tetrandrine"

Peiping, Sheng-li Hsueh-pao (Acta Physiologica Sinica), Vol 25, No 1, Mar 62, pp 93-95

Translation of German Abstract: Chao et al., recently found that Tetrandrine possesses histamine-releasing properties. There is an interest to determine whether, and how much, this affects hypotensive activity. However, a clear relation between the two could not be found. Diphenhydramine hydrochloride caused no noticeable change in the hypotensive action of Tetrandrine in cats which were narcotized with pentobarbital sodium; and in cats narcotized with Chloralose, the latency characteristic of histamine liberation did not occur.

After [the administration of] TEAB, depressive activity is reduced, which leads to the assumption of a central action.

The author is indebted to Prof Dr Lue Fu-hua for the suggestion.

(continuation of Sheng-li Hsueh-pao, Vol 25, No 1, pp 93-95)
The author expresses thanks to Prof LU Fu-hua (0712/1381/5478) under whose guidance this paper was completed, and to the Pharmacology Teaching and Research Section, Nankin First Medical College, Nanking, for their information.

This paper was received for publication on 8 December 1961.

Author's Affiliation: Pharmacology Teaching and Research Section, Wuhan Medical College, Hankow.

TAI Yun-ling (2071/0061/3781)
LIANG Yin-ch'u (2733/1377/0443)
TSOU Yu-p'ing (6760/0827/5393)
T'ANG P'ei-sung (3282/0160/2646)

"Studies on Plant Respiration: 5. Oxidative Pathways in Subcellular Particles Prepared From Etiolated Rice Seedlings"

Peiping, Scientia Sinica, Vol 12, No 12, Dec 63, pp 1859-1869

Excerpts of English Article: This paper is a study on the pathways of pyruvate oxidation in subcellular particles (mitochondria) prepared from shoots of 4-day old etiolated rice seedlings. The operation of the tricarboxylic acid (TCA) pathway was established by four results listed in the abstract. The presence of glyoxylate pathway, along with the TCA route of pyruvate oxidation in these rice seedling particulate preparations, is indicated by results obtained when homogenates and subcellular preparations were assayed for isocitratase and malate synthetase activities.

This paper was received for publication on 21 September 1963.

(continuation of Scientia Sinica, Vol 12, No 12, pp 1859-1869)
Authors' Affiliation: All of Laboratory of Plant Physiology, Institute of Botany, Chinese Academy of Sciences, Peiping.

Earth Sciences

CHOU Chia-i (0719/1367/5030)

"The Determination of Heavy Water Content in Bittern"

Peiping, Hai-yang Yu Hu-chao (Oceanologia et Limnologia Sinica), Vol 5, No 1, Feb 63, pp 11-16

Text of English Abstract: 1. The deuterium contents of two bittern samples obtained from Chiaochou Bay in Tsingtao Locality and Kwangchou Bay in Chenkiang Locality were determined by float method. Sp. gr. of Shantung sample is 1.240 (28.0° Be') and that of Kwangtung sample is 1.260 (29.7° Be'). A sample from Yellow Sea was chosen as a standard for comparison.

All determinations were carried out after normalization of O^{18} in the sample by means of CO_2-$NaHCO_3$ equilibrium method. In experiments employing a stream-lined spindle-shaped float and setting the observation region of floating in the middle portion of liquid column, a larger range of linear relation between temperature and velocity (rising or falling) of float is thus obtained, that is, temperature

(continuation of Hai-yang Yu Hu-chao, Vol 5, No 1, pp 11-16)
range is ± 0.33° C and the velocity range is ± 0.26 mm/sec.

2. Determined results show that the density of Shantung bittern sample (28° Be') is 4.208γ higher than that of standard sea water sample, that is, the D content of Shantung bittern if 0.0037 mole % D_2O higher than that of the standard (corresponding to 24.03% of D content of standard sea water sample); the density of Kwangtung bittern sample (29.7° Be') is 6.250γ higher than that of the standard, that is, the D content of Kwangtung bittern is 0.0058 mole % D_2O higher than that of the standard (corresponding to 37.66% of D content of standard sea water sample). The max. experimental error is ± 0.6γ.

3. Comparing the determined results of these two samples from Shantung and Kwangtung, we can see that the Kwangtung sample is more abundant in heavy water content (though ° Be' of two samples is not entirely the same, the density difference is still apparent). This agrees with the expected results caused by the evaporation difference which is due to the latitudinal difference between the two localities (Chenkiang situated at 21° north latitude and Tsingtao at 36° north latitude).

(continuation of Hai-yang Yu Hu-chao, Vol 5, No 1, pp 11-16)
4. The density difference between sample water and standard water shows that after solar evaporation of sea water and salting out of sodium chloride, the D content in bittern is concentrated as expected. Thus, highly concentrated bittern may be used as raw material for production of heavy water -- valuable information for the comprehensive utilization of sea water and bittern.

The author expresses thanks to YANG Yu-feng (2799/3768/7685) for participating in the experiments, to Prof CHANG Ch'ing-lien (1728/7230/5571) for his support and encouragement, and to Assistant Prof LI Fa-hsi (2621/3127/6007) for his valuable opinions.

Author's Affiliation: Department of Oceanological Chemistry, Shantung College of Oceanology.

WU Pao-ling (0702/1405/6875)
CH'EN Mu (7115/2606)

"Some Fresh Water and Mixohaline Water Polychaeta From China"

Peiping, Hai-yang Yu Hu-chao (Oceanologia et Limnologia Sinica), Vol 5, No 1, Feb 63, pp 18-29

Text of English Abstract: The specimens for the present study were collected during 1957-1962 from the estuarine and mixohaline waters of Chu Kiang, Yangtze Kiang, Hwang Ho (Yellow River), and their neighboring waters. Of the 16 species described here, 5 are for the first time recorded in China and one is new to science. A description of the new species Eteone delta is given and the ecological, as well as geographical, distribution of all species is summarized below.

1. Notes on New Species

Eteone delta sp. nov. Pl. I, fig. A-E; pl. II, A.

Length of larger, mature individual, 27 mm., number of segments over 109. Prostomium trapezoidal in outline, when seen from above, with length and width about equal. Narrower, anterior margin with two pairs of biarticulate antennae, longer posterior margin straight, at its midpoint with a small nuchal organ. Eyes 2, black, situated on

(continuation of Hai-yang Yu Hu-chao, Vol 5, No 1, pp 18-29)
the posterior half of the prostomium. Proboscis when everted somewhat cylindrical except for a slightly thickened distal end; its proximal surface smooth except for wrinkles of contraction and transverse furrows; distal end terminating in 12 subglobular papillae arranged in a complete circlet.

Dorsal cirri thick, inflated, subquadrangular, longer than broad in mid-region and somewhat longer more posteriorly, extending distally beyond neuropodial lobes. Ventral cirri never extending beyond the setigerous lobe. Setae slender, pointed distally, 12 to 15 in a fascicle; articulation as in Pl. II fig. A. Pygidium terminating in a pair of thick, short papillae.

Type materials -- The holotype, paratype, and additional specimens have been deposited in the Institute of Oceanography, Chinese Academy of Sciences, Tsingtao.

Type locality -- Yangtze Delta, Shanghai.

2. Notes on Ecological Distribution

1. The species Chinonereis edestus Chamberlin and Namalycastis longicirris (Takahashi) are purely fresh-water species.

2. Three species known to occur exclusively in mixohaline water are Dendronereis aestuarina Southern, Nereis glandicincta Southern, and Mastobranchus indicus Southern.

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3. The species Eteone delta sp. nov., Namalycastis abiuma (Muller), and Tylorrhynchus heterockaetus (Quatrefages) are found in both mixohaline and fresh waters.

4. Seven species -- Tylonereis bogoyawleskyi Fauvel, Perinereis aibuhitensis Grube, Polydora (Carazzia) kempi Southern, Prinospio pinnata Ehlers, Magelona sp., Capitellethus dispar Ehlers, and Sternaspis scutata (Ranzani), are found in both mixohaline and marine waters. These are, in reality, marine species which are more or less adapted to environments of varying salinity.

5. Only three species, Nereis japonica Izuka, Nephthys polybranchia Southern, and N. oligobranchia Southern, are found to occur in marine, mixohaline, and fresh regiments.

The authors express thanks to CHANG Shih-mei (1728/0013/5019), Production Department, Shanghai Fisheries College, for his help in compiling specimens; to TS'UI K'o-to (1508/0668/6995) and to the Chemistry Laboratory, Institute of Oceanography, Chinese Academy of Sciences, for determining the degree of salination; and to WANG Hsing-yu (3769/5281/5713) for his drawings.

(continuation of Hai-yang Yu Hu-chao, Vol 5, No 1, pp 18-29)
This paper is investigation and report No 216 of the Institute of Oceanography, Chinese Academy of Sciences.

Authors' Affiliation: Both of Institute of Oceanography, Chinese Academy of Sciences.

CHANG Chun-fu (1728/1498/3940)
HSIA En-chan (1115/1869/3277)
HSIA Pang-mei (1115/6721/5019)

"A Comparative Study of Hypnea Musciformis (Wulf.) Lamouroux and Hypnea Japonica Tanaka"

Peiping, Hai-yang Yu Hu-chao (Oceanologia et Limnologia Sinica), Vol 5, No 1, Feb 63, pp 35-42

Text of English Abstract: The marine alga, which is called "Ci-wei-dong" in our country, has long been passed among us under the name "Hypnea musciformis (Wulf.) Lamouroux" since it was identified to that species by previous algologist.

Tanaka (1941) established a new series "Hypnea japonica Tanaka," which was rather closely related to H. musciformis. He noted that "This new species has some resemblance to H. musciformis (Wulf.) Lamouroux, but it is large and cartilaginous, while in H. musciformis (Wulf.) Lamouroux the frond is membranaceous and slender." Our study shows that the above-mentioned characteristic is very variable, hence unreliable. Very fortunately, many foreign specimens from various sources (see Table 1) deposited in the Herbarium of the Institute of

(continuation of Hai-yang Yu Hu-chao, Vol 5, No 1, pp 35-42)

Oceanology, Academia Sinica, were available for our study, thus rendering the present study possible.

The writers were at first tempted to refer to H. japonica as a variety of H. musciformis. Later, after a thorough study of all specimens, we found a difference between the two related species in the position of the tetrasporangia. In H. musciformis, tetrasporangia are scattered over the swollen portions in the upper and middle parts of tetrasporic branch; or in very rare cases, they are scattered over the swollen portions at or near the lower part of the tetrasporic branch. This constant characteristic bears important taxonomic significance and offers a reliable characteristic for separating H. japonica from H. musciformis.

After re-examination of the Chinese and foreign specimens on the basis of the above-discussed characteristic, we have come to the conclusion that specimens of R. E. Vaughan's No 988 (Mauritius), F. Thivy (two sheets, without collective number from India), C. K. Tseng's No 3174 (Woods Hole, U.S.A.), C. Messina's No 188 (Florida, U.S.A.), W. R. Taylor's No 620 (Florida, U.S.A.) and a numberless one (Mass., U.S.A.), H. H. Bartlett's No 17835, No 17894, No 17957, No 17964, and No 17995 (Haiti) are referable to H. musciformis and specimens collected from China, Japan, Viet Nam, the Philippines (except A. N.

(continuation of Hai-yang Yu Hu-chao, Vol 5, No 1, pp 35-42)

Benemerito's No 248), and Indonesia are referable to H. japonica. Specimens of Hong Kong are referable to H. japonica too. A. N. Bernemerito's No 248 is clearly not either of them.

In the present paper, discussion has been devoted to the graphical distribution of H. musciformis and H. japonica.

The authors express thanks to Prof TS'ENG Ch'eng-k'uei (2582/0701/1145), deputy director, Institute of Oceanography, for reviewing the paper and to FENG Ming-hua (7458/2494/5478), Institute of Oceanography, for his drawings.

Authors' Affiliation: All of Institute of Oceanography, Chinese Academy of Sciences.

TUNG Mei-ling (5516/5019/7881)

"A Preliminary Phytogeographical Study on Chinese Species of Enteromorpha"

Peiping, Hai-yang Yu Hu-chao (Oceanologia et Limnologia Sinica), Vol 5, No 1, Feb 63, pp 46-51

Text of English Abstract: 1. The genus Enteromorpha is rather cosmopolitan. Since the investigation of this genus is far from being through, it is difficult to certify the temperature nature and the distributive direction of the majority of its species now. In the present paper, we try to study the Chinese species of Enteromorpha from among their distribution and quantity in various Chinese seas, with reference to the record of the related literature.

2. With some few exceptions, it is difficult to certify the temperature nature of the Enteromorpha species by geographical method. The result of the phytogeographical study of the Enteromorpha of the Chinese coast shows that the phytogeographical study of the Enteromorpha not only requires the exact determination, but also pays attention to the quantity; the latter will help in the understanding of the tendency of its geographic distribution.

(continuation of Hai-yang Yu Hu-chao, Vol 5, No 1, pp 46-51)

3. Among the twelve species found in our flora, four species are distributed throughout our three seas, one species is limited to the Yellow Sea, four species are limited to the South China Sea, and two species are found in both the East and the South China seas.

4. The distribution of Enteromorpha shows that the number of its species distributed in the South China Sea is more than those in the Yellow and the East China seas and that the quantity of its species distributed in the East China Sea and the Fukien coast of Northern South China seas is much more than that of other regions.

5. As to the constituents of the species in our three seas, we may see that the warm water species are dominant in the South China Sea, that the temperature water species are dominant in the Yellow Sea, and that the temperature nature of the species in the East China Sea is just between the Yellow and South China seas.

This paper was written under the direction of CHANG Chun-fu (1728/1498/3940), Institute of Oceanography, and reviewed by Prof TS'ENG Ch'eng-kuei (2582/0701/1145), deputy director of Institute of Oceanography. The author expresses thanks to CHANG Te-jui (1728/1795/3843) for correcting the foreign language excerpts.

(continuation of Hai-yang Yu Hu-chao, Vol 5, No 1, pp 46-51)
This paper is investigation and research report No 200 of the Institute of Oceanography, Chinese Academy of Sciences; this paper was read at the symposium on marine plants and animals held in Tsingtao in June 1962.

Author's Affiliation: Institute of Oceanography, Chinese Academy of Sciences.

CH'IN Yun-shan (4440/5686/3790)

"Study of the Relief and Ground Sediments of the Continental Shelf of the China Sea"

Peiping, Hai-yang Yu Hu-chao (Oceanologia et Limnologia Sinica), Vol 5, No 1, Feb 63, pp 71-85

Excerpts of Russian Abstract: This paper lists the characteristics of basic elements in the relief of the continental shelf of the China Sea, with the following conclusions: (a) maximum width of the shelf is 735 miles; (b) maximum depth of the external boundary is 140 meters; (c) average depth is 45 meters; and (d) the average slope is 0°02'. The author considers the sequence of the relief to be the most important characteristic feature of this shelf. For example, submerged valleys, terraces, and deltas are often found on the sea floor. The author divides the shelf deposits into two types: the fine-grained internal shelf deposit with smaller $CaCO_3$ content than the coarse-grained external shelf deposit. The paper concludes with a preliminary consideration of the controlling factors which form these types of sediments.

(continuation of Hai-yang Yu Hu-chao, Vol 5, No 1, pp 71-85)
This paper was completed under the direction of CHANG Chao-chin (1728/0340/3866). The author expresses thanks to CHANG Wen-yu (1728/2429/0147) for reviewing the paper, to YEH Chih-cheng (2814/3112/6927) who revised the paper and gave valuable advice to the author, and to CHENG T'ieh-min (6774/6993/3046) and CHANG Chih-chung (1728/1807/1813), instructor at Hangchow University, for their calculations and drawings.

This paper is investigation and research report No 202 of the Institute of Oceanography, Chinese Academy of Sciences.

Author's Affiliation: Institute of Oceanography, Chinese Academy of Sciences.

LI Shang-hao (7812/1424/6275)
YU Min-chuan (0205/2404/1227)
LI Kuang-cheng (2621/0342/2973)
TS'ENG Chi-mien (2582/4949/4875)
CH'EN Chia-yu (7115/0857/0147)
KAO Pao-yun (7559/1405/7189)
HUANG Hung-chin (7806/1347/6855)

"Limnological Survey of the Lakes of Yunnan Plateau"

Peiping, Hai-yang Yu Hu-chao (Oceanologia et Limnologia Sinica), Vol 5, No 2, May 63, pp 87-113

Excerpts of English Abstract: There are many lakes on the Yunnan Plateau of Southwestern China, with an elevation of about 2,000 meters above sea level. They are mostly distributed over the eastern part of the Plateau, surrounding the Kunming region and forming the Kunming lake group, which consists of 7 lakes, namely, Kunminghu Lake, Chuhu Lake, Yanglinhu Lake, Yangchunghai Lake, Fusienhu Lake, Singyunhu Lake, and Ch'iluhu Lake. All but the last mentioned lake have their maximum-length axes run south and north, thus coincident with the orientation of the orographic foldings of the Yunnan Plateau thrown up during Yanshanian and Himalayan orogenesis.

(continuation of Hai-yang Yu Hu-chao, Vol 5, No 2, pp 87-113)
In 1957, from July to October, we made a general survey of most lakes of the Kunming lake group, as well as Ilunghu Lake and Dat'unhu Lake to the south and Erhai Lake to the west. The morphometric aspects of the lake basins, the physical and chemical properties of lake waters, and the biological conditions, including phytoplankton and zooplankton, benthos, aquatic vascular plants, fishes, and the production of lakes, have been investigated.

In this paper, only the general features of the lakes are given, such as the depth, temperature, dissolved oxygen content, and horizontal and vertical distributions of phyto-plankton and zoo-plankton and fish.

The authors express thanks to YAO Yung (1202/3196), CHANG Yang-k'ang (1728/2254/1660), and CHANG Li-shan (1728/4409/0810), and to CH'EN Shih-p'ing (7115/1102/1627), CH'EN Hsiu-jung (7115/0208/2837), and WANG Hua (3769/5478) of the laboratory, Yunnan Aquatic Products Company, and to CH'IEN Ch'eng-yu (6929/3397/1342) and others of the Biology Department, Yunnan University for participating in the investigation work and to CHANG Chin-ch'uan (1728/0356/2973), LI Wan-chou (2621/5202/3166), HUANG En-i (7806/1869/1355), LIN K'un-erh

(continuation of Hai-yang Yu Hu-chao, Vol 5, No 2, pp 87-113)
(2651/0981/0059), and WU Hua-ken (6762/5478/2704) for arranging the work.

Authors' Affiliation: All of Institute of Hydrobiology, Chinese Academy of Sciences.

LI Yen (2621/1693)

"Studies on the Determination of Nitrate in Sea Water With Sodium Diphenylbenzidine Sulfonate"

Peiping, Hai-yang Yu Hu-chao (Oceanologia et Limnologia Sinica), Vol 5, No 2, May 63, pp 115-122

Text of English Abstract: The determination of nitrate in sea water both in the study of primary productivity and in that of nitrogen cycle in the seas is quite significant.

A new reagent, sodium diphenylbenzidine sulfonate, for nitrate determination was prepared from sodium diphenylamine sulfonate. The latter was first oxidized by $K_2Cr_2O_7$ to diphenylbenzidine sulfonic acid violet in 10% H_2SO_4, followed by the reduction with Na_2SO_3 to diphenylbenzidine sulvonic acid, and then a powdery product was precipitated by salting-out procedure.

Some properties of this compound were studied. The potential titration curves of sodium diphenylamine sulfonate and the product showed that the sodium diphenylbenzidine sulfonate obtained was really an

(continuation of Hai-yang Yu Hu-chao, Vol 5, No 2, pp 115-122)
intermediate product of sodium diphenylamine sulfonate in the oxidation process.

A method for the determination of nitrate contents in sea water with the prepared reagent was developed, which appeared to be more sensitive than that with sodium diphenylamine sulfonate directly. An analytical procedure recommended is as follows: Add 2.5 ml of nitrogen-free conc. H_2SO_4 rapidly (about 3-4 sec.) to a test tube containing 3 ml of sea water sample, mix and cool at room temperature for 40 minutes, and then add one drop of the reagent aqueous solution 0.2%. After shaking thoroughly and standing 40 minutes, the optical density of the solution is measured spectrophotometrically at 566 mu with a one-cm cell. The method is suitable for the range of nitrate concentrations from 5 to 100 mg NO_3-N/m^3, with an average error of 5%.

Though the optical density and the nitrate contents are not in linear relationship, from the recovery and the results obtained as compared with hydrazine sulfate method is was shown that this method is satisfactory and convenient in the routine analysis of sea water samples.

(continuation of Hai-yang Yu Hu-chao, Vol 5, No 2, pp 115-122)
The author expresses thanks to Prof LIANG Shu-ch'uan (2733/2885/2938) for examining the paper and to CHANG Yen-hsia (1728/3601/7209) for assisting with spectrographic determinations.

This paper is investigation and research report No 212 of the Institute of Oceanography, Chinese Academy of Sciences.

Author's Affiliation: Institute of Oceanography, Chinese Academy of Sciences.

CHANG Hsi (1728/3886)
CH'I Chung-yen (7871/6945/1750)
CHANG Fu-sui (1728/4395/4840)
MA Hsiu-t'ung (7456/4937/0681)

"A Preliminary Study of the Demarcation of Marine Molluscan Faunal Regions of China and Its Adjacent Waters"

Peiping, Hai-yang Yu Hu-chao (Oceanologia et Limnologia Sinica), Vol 5, No 2, May 63, pp 124-137

Text of English Abstract: The molluscan fauna of our seas is rich both in species and in quantity. Before the liberation, there were only a few published reports concerning certain molluscan groups of certain regions. Up to now, the demarcation of Chinese molluscan faunal regions is still poorly investigated. The material for the present study was collected during the last ten years or more. The principal results may be summarized as follows:

1. The Chinese marine molluscan fauna is made up of 3 components: (1) a boreal element which is composed of a few northern species occurring only in the Yellow Sea and Pohai; (2) an Indo-West-Pacific element which is composed of a great number of southern species, some of

(continuation of Hai-yang Yu Hu-chao, Vol 5, No 2, pp 124-137)
which are widely distributed along our coasts; others are restricted to the East and South China seas or only to the South China Sea; (3) an endemic element of the Sino-Japanese region, which includes some temperate species occurring only in the Yellow Sea and in the waters of northern Japan, and warm-water species occurring in the East and South China seas and in waters of southern Japan.

2. As a result of analysis of the distribution of the members of 35 warm water families and of certain temperate and pure tropical forms, we were able to delineate the following molluscan faunal regions of our seas: (1) a warm temperature region which includes the Yellow Sea and Pohai; (2) a subtropical region which includes the East China Sea, the north-western coast of Taiwan, and the northern coast of Hainan; and (3) a tropical region including the south-eastern coast of Taiwan, the coast of the southern tip of Hainan Island, and the area south of them.

3. Based on the distribution around Japanese waters of some species, some of which in our waters have restricted their northern limit of distribution at the mouth of Yangtze River and its adjacent area and others at the southern tip of Hainan Island and Paracel Islands, we

(continuation of Hai-yang Yu Hu-chao, Vol 5, No 2, pp 124-137)
are inclined to infer that the northern boundary of the subtropical molluscan fauna of Japan lies near Chosi, east of Tokyo, on the oceanic side and about Noto peninsula on the Sea of Japan, while its southern boundary lies near Amami-Oshima, slightly north of Riu Kiu Islands (see tables 3-5).

4. The marine molluscan fauna of China, compared with that of adjacent waters, is closely allied with that of Japan. The results of quantitative analysis of species belonging to eight families show that a great number of our species occur also in the waters of Japan (see table 1).

5. According to the resemblance of the components of the Chinese and Japanese molluscan fauna, it seems better to consider that within the subtropical regions of China and Japan there is an independent zoogeographical unit, which is a part of the Indo-West-Pacific region and may be designated as a Sino-Japanese subregion. The areas south of it, such as the coasts of the southern tip of Hainan Island, south-eastern Taiwan, and the Paracel Islands, should belong to the tropical Indo-Malayan subregion. The Yellow Sea, Pohai, the northern Japanese coast, and regions north of it may belong to the Far East subregion of the temperate North Pacific region (see fig 2).

(continuation of Hai-yang Yu Hu-chao, Vol 5, No 2, pp 124-137)
This paper is investigation and research report No 229 of the Institute of Oceanography, Chinese Academy of Sciences. This paper was read at the Conference on Marine Plants and Animals jointly sponsored by the Chinese Society of Oceanology and Limnology and the Institute of Oceanography, Chinese Academy of Sciences, in Tsingtao in June 1962, as well as at the Conference on West Pacific Marine Animals and Grasses sponsored by the West Pacific Fishing Research Committee in Leningrad, USSR, in September 1962.

Authors' Affiliation: All of Institute of Oceanography, Chinese Academy of Sciences.

SHEN Chia-jui (3088/0857/3843)
LIU Jui-yu (0491/3843/3768)

"Preliminary Study on the Characteristics of the Crab Fauna of China Seas"

Peiping, Hai-yang Yu Hu chao (Oceanologia et Limnologia Sinica), Vol 5, No 2, May 63, pp 139-150

Excerpts of English Abstract: There are approximately 500 species of crabs found in China seas. With the exception of the indigenous warm-water species found along the coasts of China and the North Pacific immigrants found in the Yellow Sea, most of them are tropical and sub-tropical elements distributed widely in Indo-West Pacific region.

The distribution of the warm-water species in China seas and the neighboring waters is greatly influenced by the Kuroshio warm current, which brings the tropical elements from the South China Sea or the Philippines, passing by the Taiwan Island and the Loo Choo Archipelagoes more to the Pacific side of Japan than to the coastal waters of China, with only a small portion penetrating into the Japan Sea, in which they extend their distribution as far as the northern shores of Honshu and

(continuation of Hai-yang Yu Hu-chao, Vol 5, No 2, pp 139-150)
farther northward to the southern shores of Hokkaido and Sakhalin. But on account of the continental climatic conditions and the Oyashio cold current from the North Pacific, the hydrological conditions of the North West Pacific again remarkably influenced, and consequently, the composition of the crab fauna in the region between China, Japan, and Korea or even in the coastal waters of China is modified to a certain extent.

The paper discusses the characteristics of the crab fauna of the China seas and compares it with that of Japan and Korea.

This paper is investigation and research report No 228 of the Institute of Oceanography, Chinese Academy of Sciences. This paper was read at the Conference on Marine Plants and Animals jointly sponsored by the Chinese Society of Oceanology and Limnology and the Institute of Oceanography, Chinese Academy of Sciences, in Tsingtao, in June 1962, as well as at the Conference on West Pacific Marine Animals and Grasses sponsored by the Seventh Plenary meeting of the West Pacific Fishing Research Committee in September 1962.

(continuation of Hai-yang Yu Hu-chao, Vol 5, No 2, pp 139-150)
Authors' Affiliation: SHEN, Institute of Zoology, Chinese Academy of Sciences; LIU, Institute of Oceanography, Chinese Academy of Sciences.

WU Pao-ling (0702/1405/6875)
P. V. Ushakov

"A Preliminary Zoogeographical Study on Polychaeta in the Yellow Sea"

Peiping, Hai-yang Yu Hu-chao (Oceanologia et Limnologia Sinica), Vol 5, No 2, May 63, pp 154-162

Excerpts of Russian Abstract: A wealth of materials on Polychaete worms was collected from both the Yellow Sea and the South China Sea (Hainan Island) as a result of works of the 1957-1960 Sino-Soviet Marine Zoological Expedition of the Institute of Oceanology, Chinese Academy of Sciences (Tsingtao), and the Institute of Zoology, Academy of Sciences USSR (Leningrad). However, only the materials from the northern parts of the Yellow Sea were completely processed. The 245 species and subspecies of Polychaetae now determined in this sea include 114 Errantia and 131 Sedentaria. Only 52 of these species were known in this sea prior to the work of the Expedition. Interesting facts have been obtained in comparing Polychaeta fauna in the Yellow Sea with those from other regions along the Asian coast. An important category in the composition of Yellow Sea fauna is formed by the species endemic to this sea and the coast of China. The occurrence of a great number of

(continuation of Hai-yang Yu Hu-chao, Vol 5, No 2, pp 154-162)
amphipacific species is described, as well as a certain amphiboreal species closely related to the former.

This paper is investigation and research report No 227 of the Institute of Oceanography, Chinese Academy of Sciences. This paper was read at the conference on marine plants and animals jointly sponsored by the Chinese Society of Oceanology and Limnology and the Institute of Oceanography, Chinese Academy of Sciences, in Tsingtao, in June 1962, as well as at the conference on West Pacific marine animals and grasses sponsored by the West Pacific Fishing Research Committee in Leningrad, USSR, in September 1962.

Authors' Affiliation: Ushakov, Institute of Zoology, Academy of Sciences, USSR; WU, Institute of Oceanography, Chinese Academy of Sciences.

FAN Kung-chu (2868/1872/3515)

"On the Phytogeographical Distribution of the Siphonocladales in China"

Peiping, Hai-yang Yu Hu-chao (Oceanologia et Limnologia Sinica), Vol 5, No 2, May 63, pp 165-171

Text of English Abstract: A study on the distribution of the green algal order Siphonocladales (except the genus Cladophoropsis) of China has been made. It is found that in China, most species of this order are confined to Hainan, the Paracels Islands, and the southeastern coast of Taiwan; only a few species are on the coasts of mainland and the northwestern part of Taiwan. On the continental coast, the northernmost limit of the members of this order under study lies roughly around Tungshan and Amoy (Fukien Province). This is, in general, true also for many other tropical genera. The warm currents and China Coastal Current are two contributory causes of floristic changes. An analysis of the components of the Siphonocladales indicates that the marine flora of the South China Sea is characteristic of the Indo-West Pacific.

(continuation of Hai-yang Yu Hu-chao, Vol 5, No 2, pp 165-171)
Both the paleontological evidence of the fossil genus Pycnoporidium and the pattern of the discontinuous distribution of the modern species (see Table 1) suggest that the members of this order had been widely distributed in the Tethys Sea before and in the Tertiary Period.

This paper is investigation and research report No 198 of the Institute of Oceanography, Chinese Academy of Sciences. This paper was read at the Conference on Marine Plants and Animals jointly sponsored by the Chinese Society of Oceanology and Limnology and the Institute of Oceanography, Chinese Academy of Sciences, in Tsingtao, in June 1962, as well as at the Conference on West Pacific Marine Animals and Grasses sponsored by the West Pacific Fishing Research Committee in Leningrad, USSR, in September 1962.

Author's Affiliation: Chi-nan University; Institute of Oceanography, Chinese Academy of Sciences.

FANG Tsung-hsi (2455/1350/3556)
CHIANG Pen-yu (5592/2609/4416)

"Inheritance of Frond Links in Laminaria Japonica Aresch"

Peiping, Hai-yang Yu Hu-chao (Oceanologia et Limnologia Sinica), Vol 5, No 2, May 63, pp 172-182

Text of English Abstract: This paper discusses the genetical factors affecting the growth in the frond length of Laminaria japonica Aresch., vernacularly called "Haidai."

1. The frond length is a quantitative character with a continuous variation showing normal distribution.

2. There were evidences for the front length to be an inheritable character. The average length of the offspring from a pedigree with a longer frond was, as a rule, significantly longer than that from a pedigree with a shorter frond. The distribution of various lengths of the offspring from a short frond was seen to overlap with that of offspring from a long frond.

(continuation of Hai-yang Yu Hu-chao, Vol 5, No 2, pp 172-182)
3. Through continuous inbreeding and selection, it would be possible to get many inbred lines with different lengths of frond and thus to obtain a breed with a much longer frond and another one with a much shorter frond.

4. The shorter sporelings from a population could grow, if transplanted in time, to a length attained by the longer sporelings of the same population, provided the difference in length between the shorter and longer sporelings was not too great, for example, not over 25 cm. If the difference in length was very great, for example, over 30 cm, the shorter sporelings would not, on the average, be able to reach the characteristic length of the pedigree.

5. The growth of the frond length was analyzed to be governed by a number of cumulative, nondominant genes, as well as many environmental factors.

The authors express thanks to T'AN Shu-chih (6223/1060/0037) for overseeing the research and for his measuring work, to Prof TS'ENG Ch'eng-k'uei (2582/0701/1145), deputy director of the Institute of Oceanography, Chinese Academy of Sciences, and WU Ch'ao-yuan (0702/6389/0337)

(continuation of Hai-yang Yu Hu-chao, Vol 5, No 2, pp 172-182)
for their valuable opinions, and to FENG Ming-hua (7458/2494/5478) for his drawings.

This paper is investigation and research report No 219 of the Institute of Oceanography, Chinese Academy of Sciences.

Authors' Affiliation: FANG of Shantung College of Oceanology and Institute of Oceanography, Chinese Academy of Sciences; CHIANG of Institute of Oceanography, Chinese Academy of Sciences.

MU En-chih (4476/1869/0037)
CH'IAO Hsin-tung (0829/2450/2639)

"New Materials of Abrograptidae"

Peiping, Ku-sheng-wu Hsueh-pao (Acta Palaeonthologica Sinica), Vol 10, No 1, Feb 62, pp 1-4

Excerpts of English Summary: Recently, while investigating the Ordovician graptorites of Chekiang, the writers found a number of specimens of the family Abrograptidae among the collections of graptolites deposited in this institute. Four species belonging to four genera are recognized as follows: (1) Dinemagraptus Sinicus sp. nov. (2) Abrograptusformosus Mu. (3) Parabrograptus Tribrachiatus gen. et sp. nov. (4) Jiangshanites ramosus gen. et sp. nov.

These graptolite specimens were mainly collected by Prof Y. H. Lu, Miss Y. T. Hou, J. P. Chang, T. Y. Liu, and one of the writers (Mu) from the Middle Ordovician Hulo shale of the Kiangshan District, Western Chekiang, in 1954 and partly by M. Y. Geh and others from the Hulo shale of Longyou, Chekiang, in 1958.

(continuation of Ku-sheng-wu Hsueh-pao, Vol 10, No 1, pp 1-4)
The following is a description of species which give family Abrograptidae Mu, 1958, Genus Dinemagraptus Kozlowski, 1951, and Dinemagraptus sinicus sp. nov. This species is represented by some ten specimens. It goes on to list the ten species and explain each.

The specimens described in this article are all preserved at the Institute of Geology and Paleontology, Chinese Academy of Sciences. The author thanks CHANG Wu-ts'ung (1728/0523/5115) for the sketches.

Authors' Affiliation: MU of Institute of Geology and Paleontology, Chinese Academy of Sciences; CH'IAO of Sinkiang-Uighur Autonomous Region, Bureau of Geology.

LI Chi'chin (2621/4480/6855)
CH'EN Hsu (7115/2485)

"Cambrian and Ordovician Graptolites From Sanbu, S. Kueichow"

Peiping, Ku-sheng-wu Hsueh-pao (Acta Palaeonthologica Sinica), Vol 10, No 1, Feb 62, pp 12-27

Excerpts of English Summary: In the spring of 1959, Messrs Y. Y. Chien, W. N. Lee, and S. S. Chang and one of the writers (Lee) collected a number of graptolite specimens from the Cambrian and Ordovician beds in the Sandu District, S. Kueichow. Twenty-six species and varieties are recognized; four of them are new. They were derived from the following different horizons: I. Sandu Shale (Upper Cambrian). II. Guotang Formation (Tremadocian). III. Tonggao shale (Arenigian). The summary goes on to describe the new forms and give tables with order of branching, etc. A table is also included with length of stipe, diverging angle, width of stipe, length of theca, number of theca in 10 mm., overlap of theca, and inclined angle of theca.

(continuation of Ku-sheng-wu Hsueh-pao, Vol 10, No 1, pp 12-27)
The specimens mentioned are preserved in the Institute of Geology and Paleonthology, Chinese Academy of Sciences.

Authors' Affiliation: Both of Institute of Geology and Paleonthology, Chinese Academy of Sciences.

CHANG Wen-t'ang (1728/2429/1016)

"On the Genus Eoredlichia"

Peiping, Ku-sheng-wu Hsueh-pao (Acta Palaeonthologica Sinica), Vol 10, No 1, Feb 62, pp 36-41

Excerpts of English Summary: In 1950, the writer designated Redlichia intermedia lu as the genotype of the genus eoredlichia. In a paper published in 1953, the writer pointed out that Wutingaspis is a synonym of Eoredlichia and that the former may be regarded as a subgenus of Redlichia. The summary goes on to describe Eoredlichia and its characteristics.

The summary also defines family Redlichiidae Poulsen, 1927; sub-family Pararedlichiinae Hupeh, 1953; Genus Eoredlichia Chang, 1950, as described in two papers: "Eoredlichia Chang," read in the Annual Meeting of the Paleontological Society of China, in Peiping, 1950 (Huai-shun of the Geological Society of China, Vol 2, No 1, p 10, 1951), and "Eoredlichia Chang," Ku-sheng-wu Hsueh-pao (Acta Palaeonthologica Sinica), Vol 1, No 3, p 121, 141.

(continuation of Ku-sheng-wu Hsueh-pao, Vol 10, No 1, pp 36-41)
Author's Affiliation: Institute of Geology and Paleontology, Chinese Academy of Sciences.

HSU I-wen (6079/0308/2429)

"New Species of Marine Lilium in the Middle Silurian. Formation in Szechwan Province"

Peiping, Ku-sheng-wu Hsueh-pao (Acta Palaeonthologica Sinica), Vol 10, No 1, Feb 62, pp 45-48

Excerpts of Russian Summary: In 1961, during an expedition survey of the Silurian faults, which are located near the village of T'se-chih, Ch'ang-yuan, North Szechwan Province, Prof CHAO Chin-k'o (6392/6855/4430) and CH'EN Hsu (7115/2485), both of the Institute of Geology and Paleontology, Chinese Academy of Sciences, found one well preserved specimen of the calyx of a marine lilium. After the discovery of this rare specimen, it was discovered that this was a new species of the family Palaeocrinidae. They then named this new species Caelocrinus.

Author's Affiliation: Institute of Geology and Paleontology, Chinese Academy of Sciences.

HOU Hung-fei (0186/7703/7378)

"On Certain Middle Devonian Bradiiopods in Hami, Sinkiang"

Peiping, Ku-sheng-wu Hsueh-pao (Acta Palaeonthologica Sinica), Vol 10, No 1, Feb 62, pp 55-63

Excerpts of Russian Summary: The Devonian System is very widely distributed in Sinkiang Province. However, Devonian fauna in this region has almost never been studied. Works describing this fauna are absolutely nonexistent.

Recent geological survey operations have covered important regions in Sinkiang. A great number of fauna were collected during these surveys.

The specimens described in this paper were collected by the third party of the Geological Survey Expedition of Sinkiang in the Western part of Hami District (95 degrees 55 minutes, 41 degrees 49 minutes). Deposits with fauna characteristics consist of Tufous sands and limestone series. These deposits are named after the To-su-chen Suite whose thickness readies 9,000 meters.

(continuation of Ku-sheng-wu Hsueh-pao, Vol 10, No 1, pp 55-63)
This paper describes ten species of Bradiiopods, five of which are new.

Author's Affiliation: Academy of Geological Sciences, Ministry of Geology.

OU Yang-shu (2962/7122/5289)

"The Microspore Assemblage From the Lungtan Series of Changhsing, Chekiang"

Peiping, Ku-sheng-wu Hsueh-pao (Acta Palaeonthologica Sinica), Vol 10, No 1, Feb 62, pp 76-113

Excerpts of English Summary: The gigantopteris-bearing Lungtan Series in South China, which is similar to the Upper Shihhotze Series in North China, has been considered by Halle, Gothan, and Sze to be Middle Permian or even probably lower Lower Permian in age. They believe that the Gigantopteris-bearing formation of Eastern Asia can be correlated to the Middle and Upper Rotliegende of Europe. Many geologists, especially T. K. Huang, hope that this coal series belongs to the Upper Permian. H. H. Lee recently supported the latter assumption.

In Changhsing District, Northern Chekiang, the total thickness of the Lungtan series exceed 500 meters. Here the strata can be divided into three parts. The summary goes on to discuss and name the three parts. The summary goes on to list and name the system of classification of

(continuation of Ku-sheng-wu Hsueh-pao, Vol 10, No 1, pp 76-113)
the microspores and describes each one. Plates also accompany this summary.

Author's Affiliation: Institute of Geology and Paleontology, Chinese Academy of Sciences.

MU En-chih (4476/1869/0037)
CHEN Hsu (7115/2485)

"Sinodiversograptus Multibrachiatus Gen. et sp. nov. and Its Developmental Stages"

Peiping, Ku-sheng-wu Hsueh-pao (Acta Palaeonthologica Sinica), Vol 10, No 2, May 62, pp 143-150

Excerpts of English Summary: The new graptolite Sinodiversograptus Multibrachiatus gen. et sp. nov. described in the present paper was recently secured by Messrs R. J. Cao, T. Y. Liu, T. Y. Zhang, and one of the writers (Chen) from the Spirograptus Turriculatus zone of the Lower Silurian at Qiaoting of Nanjiang District during a geological excursion to Northern Szechuan Province. This species is represented by numerous specimens preserved in a bleached black shell. Based on a series of specimens in various stages and development of rhabdosome, the developmental process of this new graptolite may be recognized. The summary goes on to discuss in detail the new graptolite.

The next part of the summary concerns family monograptidae lapworth, 1873; subfamily cyrtograptinae Averianow, 1929; Boucek, 1933; emend.

(continuation of Ku-sheng-wu Hsueh-pao, Vol 10, No 2, pp 143-150)
Yin, 1937; and Genus Sinodiversograpts gen. nov. This part of the summary is a diagnosis and shows comparisons.

Plates accompany this article.

Authors' Affiliation: Both of Institute of Geology and Paleontology, Chinese Academy of Sciences.

LU Yen-hao (4151/5888/6275)

"Restudy on Grabau's Types of Three Silurian Trilobites From Hupeh"

Peiping, Ku-sheng-wu Hsueh-pao (Acta Palaeonthologica Sinica), Vol 10, No 2, May 62, pp 158-166

Excerpts of English Summary: This summary is a description of species. The species are Suborder Illaenina Jaanusson, 1959; Superfamily Illaenacea Hawle ep Corda, 1847; Family Illaenidae Hawle ep Corda, 1847; and Genus Ptilillaenus Lu (gen. nov.). Following these is a diagnosis, genotype, occurrence, and discussion.

Plates accompany this article.

Author's Affiliation: Institute of Geology and Paleontology, Chinese Academy of Sciences.

SHENG Chin-chang (4141/6855/4545)
WANG Yun-hui (3769/0061/1979)

"The Fusulinids of the Maokou Stage, Southern Kiangsu"

Peiping, Ku-sheng-wu Hsueh-pao (Acta Palaeonthologica Sinica), Vol 10, No 2, May 62, pp 176-183

Excerpts of English Summary: The Maokou Fusulinds described in this paper were collected by the members of the field party of the Kiangsu Geological Bureau in the vicinity of Wusi and Suchow cities, Southern Kiangsu. The deposits of the Maokou Stage of the region have been named by the collectors of the Yianchiao Formation. The whole sequence of this formation can be roughly subdivided into three divisions. These divisions follow in the summary in detail.

The summary also gives a description of species of the order Fusulinida. It also gives the locality and it gives remarks.

The remainder of the summary discusses and describes various families as follows: Subfamily Staffellinae; family Schubertellidae Skinner, 1931; family Schwagerinidae Dunbar et Henbest, 1930; Superfamily

(continuation of Ku-sheng-wu Hsueh-pao, Vol 10, No 2, pp 176-183) Verbekinidea Staff et Wedekind, 1910; neomisellena Lepida (Schwager); and neomisellena Conpacta (Chen).

Plates accompany this article.

Authors' Affiliation: SHENG of Institute of Geology and Paleontology, Chinese Academy of Sciences; WANG of Bureau of Geology, Anhwei Province.

CH'EN Ch'u-chen (7115/2806/7201)

"Lanellidranchiata From the Upper Permian of Ziyun, Kueichow"

Peiping, Ku-sheng-wu Hsueh-pao (Acta Palaeonthologica Sinica), Vol 10, No 2, May 62, pp 191-199

Excerpts of English Summary: The Lamellidranchs described in this paper were collected by Prof Y. Wang, L. H. Loo, and the writer in the winter of 1958 from the Upper Permian at Ziyun Country of Kueichow. The Upper Permian in this region is composed mostly of limestones, with a few layers of sandstone, mudstone, and shale in the lower middle part. This part of the summary goes on to list the limestone series.

This summary also goes on to list descriptions of new species found.

Plates accompany this article.

Author's Affiliation: Institute of Geology and Paleontology, Chinese Academy of Sciences.

LIN Pao-yu (2651/1405/3768)

"Tabulatae From the Lower Permian Deposits in the Southern Part of China"

Peiping, Ku-sheng-wu Hsueh-pao (Acta Paleonthologica Sinica), Vol 10, No 2, May 62, pp 206-220

Excerpts of Russian Summary: This summary gives a description of fauna as follows: Subclass Tabulata; Order Savosidacea Wedekind; Suborder Favositina Sokolov; Family Michelinidae; and Genus Protomichelinia.

Polotary massives are formed by multiple prismatic corallites, diameter 3.8-5 millimeters. Walls are fine; thickness equals 0.2 millimeter. Connective pores are usual. Bottoms are full and convex, and 7-9 bottoms pass along 5 millimeters.

Age: Limestone chi-hsia, lower Permian; location: Szechwan Province; and formation: 1002 A/157/6.

(continuation of Ku-sheng-wu Hsueh-pao, Vol 10, No 2, pp 206-220)
Protomichelinia Multitabulata: Polypary massive, corallites polygonal. 6-7 sides; diameter 3-4 millimeters. Thickness of walls attains 0.2 millimeter. Connective pores heterogenous, round, diameter 0.12 millimeter or 0.2 millimeter. Bottom's full, faintly convex including 9-13 on 5 millimeters. Age: limestone Mao-kou, Lower Permian.

Plates accompany this article.

Author's Affiliation: Institute of Geology and Paleontology, Chinese Academy of Sciences.

CHANG Ch'un-pin (1728/2504/1755)

"Spore-pollen Complex of the Lower Cretaceous Deposits in Pao-jung District in Kiangsu Province"

Peiping, Ku-sheng-wu Hsueh-pao (Acta Palaeonthologica Sinica), Vol 10, No 2, May 62, pp 246-272

Excerpts of Russian Abstract: The Ko-ts'un suite of Pao-jung District in Kiangsu Province is represented by dark-brown sandy clays with layers of white and gray sands. This suite probably corresponds to the upper part of the Chien-te Series in Chekiang Province. The relative age of this series is estimated from the Upper Jurassic to the Lower Cretaceous, underlying deposits of the Ko-ts'un Series are the series of Hsin-fang andesite, and the P'u-k'ou suite occurs on the Ko-ts'un suite. The remainder of the resume concerns the Ko-ts'ung suite.

Plates are included in this article.

Author's Affiliation: Institute of Geology and Paleontology, Chinese Academy of Sciences.

CHOU Ming-chen (0719/2494/6966)

"A Xenarthran-like Mammal From the Eocene of Honan"

Peiping, Scientia Sinica, Vol 12, No 12, Dec 63, pp 1889-1893

Excerpts of English Article: Among the mammalian fossils which the author and his associates recently collected from various Eocene localities in Honan and Shantung, a mandible fragment with one of the grinding teeth in place from Sichwan, Honan, denotes quite plausibly the presence of a xenarthran or true edentate in the Eocene in China. This paper presents a detailed description and analysis of this fossil, Chungchienia sichuanica, whose generic name is dedicated to Prof Young Chung-chien and the specific name to the type locality. The recovery of a fossil form of megalonychoid xenarthran, should it be correctly referred to, in the Eocene of China, shows that, though the known fossil records of the earlier gravigrades are restricted to South America, they did gain a footing in Asia in Eocene time, but became extinct.

The author is indebted to Prof Young Chung-chien and Prof W. O. Dietrich of Berlin for communication in preparing the manuscripts.

(continuation of Scientia Sinica, Vol 12, No 12, pp 1889-1893)
This paper was received for publication on 25 May 1963.

Author's Affiliation: Institute of Vertebrate Palaeontology and Palaeoanthropology, Chinese Academy of Sciences.

HSIEH Chia-jung (6200/1367/2837)

"Major Geotectonic Features of Southeast China"

Peiping, Scientia Sinica, Vol 12, No 12, Dec 63, pp 1871-1887

Text of English Abstract: This paper records some of the author's studies on the major geotectonic features of Southeast China which comprises the area of the Yangtse River to the north and the coastal regions and Hainan Island to the south. In a previous paper, listed in the bibliography, the author defined this region as a shield to the north and the Chiangnannia and successive zones of Caledonian and Mesozoic geosynclines to the south. Besides, there occur many basins and troughs of Upper Paleozoic and Tertiary ages occupying longitudinal or transcurrent positions. As a result of recent study on the materials collected by the geologists of the Kwangtung Areal Geological Party, it appears that there also occurs a metamorphic and granitized zone extending from Yunfou to Canton or even farther in an approximately E-W direction. Whenter this actually represents a geosyncline of Variscian Age is to be decided by further study.

(continuation of Scientia Sinica, Vol 12, No 12, pp 1871-1887)
The author wishes to thank Mrs Y. S. TAO for the drawing of illustrations accompanying this paper.

References: The first 23 of 35 titles listed in the bibliography are in Chinese, date span 1958-1963.

This paper was received for publication on 11 November 1962.

Author's Affiliation: Academy of Geological Sciences, Ministry of Geology.

Technical Sciences

CHAO Tung-jih (6392/0392/2480)

"Housing Design and Planning for an Experimental Neighborhood in Pei-yang Ts'un"

Peiping, Chien-chu Hsueh-pao (Journal of Architecture), No 3, Mar 63, pp 1-6

Abstract: This paper examines the housing design, convenience of street layout, and loss of old neighborhood atmosphere in a new residential area of Peiping, with a view to finding solutions for some of the problems in future designs.

The author extends thanks to the Fourth Office, Peiping Municipal Planning Bureau, for their cooperation.

CH'EN Ts'ui-fen (7115/5050/5358)

"A Brief Description of the Design for the Central Street in Chia-ting Hsien, Shanghai"

Peiping, Chien-chu Hsueh-pao (Journal of Architecture), No 3, Mar 63, pp 7-10

Abstract: This paper describes a design for a main street in a section of Shanghai, including the layout of the street itself, general requirements for buildings, and exterior decorations.

HSIA Ch'ang-shih (1115/2490/0013)
MO Po-chih (5459/0130/3112)

"Ling-nan Gardens"

Peiping, Chien-chu Hsueh-pao (Journal of Architecture), No 3, Mar 63, pp 11-14

Abstract: This paper discusses the layout, construction details, and landscaping of a type of garden peculiar to Kwangtung, Southern Fukien, and Southern Kwangsi Provinces.

P'ENG I-kang (1756/001/0474)

"Art and Techniques of Landscape Architecture"

Peiping, Chien-chu Hsueh-pao (Journal of Architecture), No 3, Mar 63, pp 15-18

Abstract: This paper analyzes the characteristics, layout, and arrangement of open space in Chinese gardens, with diagrams of specific examples from several gardens.

KUO Pai-heng (6753/7818/1220)
CHANG Chin-ch'iu (1728/6930/4428)

"Spatial Design of the Liu Garden, Soochow"

Peiping, Chien-chu Hsueh-pao (Journal of Architecture), No 3, Mar 63, pp 19-23

Abstract: This paper examines the arrangement of spaces, both in the architecture and landscaping, of the Liu Gardens, with many explanatory diagrams and a picture.

PUNG Chien-hung (5516/7002/3126)

"Research Planning and Design for Garden Type Residential Areas"

Peiping, Chien-chu Hsueh-pao (Journal of Architecture), No 3, Mar 63, pp 25-28

Abstract: This paper compares several plans for groups of small residential apartments, two to eight persons per unit, 1,000 to 2,000 persons in the apartment group.

P'EI Hsuan (3099/2467)

"Planning for the New City of Wu-ning"

Peiping, Chien-chu Hsueh-pao (Journal of Architecture), No 3, Mar 63, p 24

Abstract: This paper discusses planning for construction, over a period of 7 years, of a new city of 11,000 population in Northern Kiangsi Province.

HUANG Chung-shu (7806/1813/1859)

"Views on the Improvement of Residential Construction and Groups of Residential Structures"

Peiping, Chien-chu Hsueh-pao (Journal of Architecture), No 3, Mar 63, pp 29-30

Abstract: This paper suggests several ways to improve the design and arrangement of residential units.

Chemistry, Physics, and Mathematics

YING Ch'i-ts'ung (2019, 3823/3827)
CH'IEN Jen-yuan (6929/0086/0337)

"Basic Studies on the Fractionation of High Polymers -- II. On the Solubility Function of Phase Separation"

Peiping, Hua-hsueh Hsueh-pao (Acta Chimica Sinica), Vol 28, No 5, Oct 62, pp 267-273

Text of English Abstract: 1. The molecular weight dependence of the distribution of polymer molecules between the coacervate and the dilute phases on the phase separation of polymethylmethacrylate-acetone-methanol system has been proved to follow the relation first derived by Flory for binary systems:

$$f''/f' \quad Qe^{M}$$

where f'' and f' are the weight fractions of the polymer molecules of molecular weight M in the coacervate and in the dilute phases, respectively, while Q and e are parameters. The value of Q found experi-

(continuation of Hua-hsueh Hsueh-pao, Vol 28, No 5, pp 267-273)
mentally is not equal to the volume ratio of the two phases as theory for binary systems demands. The molecular weight distributions of the original sample and the coacervate after phase separation were determined by the sedimentation velocity method in a solvent.

2. The width of molecular weight distribution of a fraction is found to decrease with repeated refractionations. The widely circulated opinion that it is not very effective after second refractionation is not justified by the present findings.

3. A simple approximate method based on the solubility function is suggested for the determination of molecular weight distributions. The method involves only two phase separation experiments and five precise determinations of intrinsic viscosity.

This paper was received for publication on 30 January 1962.

Authors' Affiliation: Both of Institute of Chemistry, Chinese Academy of Sciences.

CHIANG Ming-ch'ien (5592/2494/6197)
TAI Ts'ui-ch'en (2071/5088/6591)

"A Quantitative Relationship Between Molecular Structure and Chemical Reactivity"

Peiping, Hua-hsueh Hsueh-pao (Acta Chimica Sinica), Vol 28, No 5, Oct 62, pp 275-330

Excerpts of English Abstract: In this paper, a method for the systematic and quantitative evaluation of the inductive effect exerted over a certain chemical bond in the molecule by a group, from the electronegativities and the atomic radii of its constituent elements, has been presented. The constant for the inductive effect of the group thus obtained is designated as the inductive effect index of the group. It has been found that for a given reaction, the energy changes, the logarithms of the equilibrium constants, and the logarithms of the rate constants can be expressed, respectively, as linear functions of the corresponding inductive effect index involved in the reaction and that the percentages of chemical changes in the reaction such as percent yield and conversion, give "sigmoid" curves when plotted versus the latter. These linear functions and sigmoid curves constitute a general

(continuation of Hua-hsueh Hsueh-pao, Vol 28, No 5, pp 275-330)
quantitative relationship between molecular structure and chemical reactivity.

Finally, the usefulness of the inductive effect index has been briefly discussed. Its principal uses are: (1) to establish a general and quantitative series of the inductive effect for groups; (2) to formulate some quantitative expressions for the chemical reactivities based directly on the structure of the molecules; (3) to provide a method for confirmation of the structural formulas for certain compounds; (4) to afford a means for distinguishing the relative reactivities of the same groups but attached to different positions in a molecule; and (5) to give a method for ascertaining the mechanism of certain reactions. Examples have been given for each case.

The authors express thanks to LI Kuang-nien (2621/1684/1628) for his valuable opinions; to HSIAO Hsu-ling (5135/4872/3781), TS'ENG I (2582/1837), and LI Cheng-lin (2621/2973/6775) for their assistance in the graphic tables.

This paper was received for publication on 28 March 1962.

(continuation of Hua-hsueh Hsueh-pao, Vol 28, No 5, pp 275-330)
Authors' Affiliation: Both of Institute of Chemistry, Chinese Academy of Sciences.

JEN Yun-feng (0117/0061/1496)
CHAO Shu-wei (6392/2885/4885)
KAO I-sheng (7559/1837/3932)

"Tumor Chemotherapy-X. Nitrogen Mustards Derived From Chloramphenicol"

Peiping, Hua-hsueh Hsueh-pao (Acta Chimica Sinica), Vol 28, No 5, Oct 62, pp 333-339

Excerpts of English Abstract: In the present paper, the synthesis of 1-[p-bis (2-chloroethyl) aminophenyl]-2-dichloroacetamido-1,3-propanediol(IIIa) and 1-[bis(2-chloroethyl)aminophenyl]-2-acetamido-1,3-propanediol (IIIb), starting from p-bis (2-chloroethyl)-aminobenzoic acid (IV) or N, N-bis-(2-chloroethyl)aminobenzene (VIII) respectively, has been described.

Preliminary pharmacological examinations showed that compound IIIa exhibited pronounced inhibitory action against Jensen sarcoma in rats, and the intermediate X and IIIb were effective in inhibiting the growth of S-180 in mice. Further observation is still in progress, and the details will be reported elsewhere.

(continuation of Hua-hsueh Hsueh-pao, Vol 28, No 5, pp 333-339)
This paper was received for publication on 5 April 1962; this paper was read at the October 1961 Annual Conference of the Shanghai Municipal Chemistry and Chemical Engineering Society.

Authors' Affiliation: All of Institute of Materia Medica, Chinese Academy of Sciences.

P'AN Yu-lung (3382/3786/7893)

"The Chelatometric Determination of Tungsten"

Peiping, Hua-hsueh Hsueh-pao (Acta Chimica Sinica), Vol 28, No 5, Oct 62, pp 341-343

Text of English Abstract: An indirect chelatometric procedure for the determination of tungsten (VI) has been devised. An amount of 0.05 M lead acetate is added to the slightly acidic tungstate solution (neutral to phenol red and then 4 gm of ammonium acetate is added). The precipitate is filtered and washed with 2 percent ammonium acetate solution (slightly acidified with acetic acid) until free from lead. Dissolve the precipitate with a solution containing 4 percent sodium hydroxide and 10 percent tartaric acid, adjust the solution to pH 4, and add pH 10 buffer solution and Eriochrom T. Back titrate with zinc chloride standard solution after adding a known amount of 0.02 M EDTA standard solution. The method can be applied to samples containing 12 to 150 mg of tungsten trioxide. The analyses of a wolframite and of an ore containing tungsten and a high percentage of tin with the method proposed are given as examples.

(continuation of Hua-hsueh Hsueh-pao, Vol 28, No 5, pp 333-339)
This paper was received for publication on 31 January 1962.

Author's Affiliation: Analytical Laboratory, Hsin-hui District, Canton.

TSOU Shih-fu (6760/2514/1788)
T'AO P'ei-li (7118/3805/3769+0448)

"The Paper Chromatographic Separation of Zirconium and Hafnium"

Peiping, Hua-hsueh Hsueh-pao (Acta Chimica Sinica), Vol 28, No 5, Oct 62, pp 344-346

Text of English Abstract: The present paper deals with the separation of zirconium and hafnium by means of paper chromatography. The system (tri-n-butyl phosphate, n-butanol and xylene or benzene) saturated with nitric acid of various concentrations (8-10 N) was used as eluents. By varying the proportions of the components of the solvent system and nitric acid concentrations, six eluents were prepared and tested. All of them gave satisfactory results and separated both elements completely. Under suitable conditions, a fairly large difference (about 0.5 in the R-values between zirconium and hafnium) can be attained. Hence, the eluents proposed may be used for the separation of these two wlements.

This paper was received for publication on 8 February 1962.

Authors' Affiliation: Chemistry Department, Shantung University.

CHIANG Ming-ch'ien (5592/2494/6197)
LU Feng-ts'ai (4151/7685/2088)

"Preparation of Secondary Alkyl Esters of 0,0'-thiodivaleric Acid"

Peiping, Hua-hsueh Hsueh-pao (Acta Chimica Sinica), Vol 28, No 5, Oct 62, pp 347-348

Text of English Abstract: Three δ,δ'-thiodivalerates of the general type $S[(CH_2)_4CO_2R]_2$ (R = s-C_4H_9-, s-C_6H_{13}- and s-C_8H_{17}-), not previously reported in the literature, have been prepared by esterification of δ,δ'-thiodivaleric acid with the corresponding secondary alcohols. The yields were between 70 percent and 80 percent.

This paper was received for publication on 28 April 1962.

Authors' Affiliation: Both of Institute of Chemistry, Chinese Academy of Sciences.

WANG Yu (3076/3731)
HUANG Ching-chien (7806/2417/1017)

"Studies on Vitamin D III. -- The Synthesis of Compounds of 2-Substituted CIS-Cyclohexylideneacetic Acid Type (2) - Hydrazides of 2-KETO-CIS-Cyclohexylideneacetic Acid and Their Cyclozation and Rearrangement"

Peiping, Hua-hsueh Hsueh-pao (Acta Chimica Sinica), Vol 28, No 6, Dec 62, pp 351-363

Text of English Abstract: Various ways for the opening of the rings of 2,2-dihydroxy-cyclohexylideneacetic acid lactone (II) and 2-hydroxy-cyclohexylideneacetic acid lactone (III) have been investigated.

5,6,7,8-Tetrahydrocinnolinone-(3) [IVa, m.p. 188-189°, $\lambda_{max}^{Et\,OH}$ 296 mμ (ε 2,410), ν_{max} 3,255 (w), 3,195 (w), 1,675 (s), 1,600 (m), 1,540 (m) cm^{-1}] was formed from II with hydrazine, and 2-keto-cis-cyclohexylideneacetic acid phenylhydrazide [VI, m.p. 136-137°, $\lambda_{max}^{Et\,OH}$ 240 mμ (ε 18,300)] from II with phenylhydrazine. On heating only or on treatment with acid or alkali, VI underwent cyclization with a rearrangement into 2-phenyl-5,6,7,8-tetrahydrocinnolinone-(3) [XVIa, m.p. 121-122°, $\lambda_{max}^{Et\,OH}$ 315 mμ (ε 4,840), ν_{max} 1,685 (s), 1,600 (m) cm^{-1}]. The structure of XVIa has been established by elementary analysis, UV-

(continuation of Hua-hsueh Hsueh-pao, Vol 28, No 6, pp 351-363)

and IR-absorption spectra, and the determination of active hydrogen. The mechanism of the above mentioned rearrangement has been discussed.

1,1-benzylphenylhydrazine and 1,1-dimethylhydrazine gave with II 2-keto-cis-cyclohexylideneacetic acid benzylphenyl hydrazide [VII, m.p. 134-135°, $\lambda_{max}^{Et,OH}$ 241 mμ (ε 16,400)] and 2-keto-cis-cyclohexylideneacetic acid dimethylhydrazide (VIII, m.p. 78-79°), respectively. On heating VIII with methanolic semicarbazide acetate solution, the primary product produced was 2-keto-cis-cyclohexylideneacetic acid semicarbazide (IX, m.p. 162-163°), which underwent further transformation to form IVa. On the other hand, the same treatment converted 2-keto-transcyclohexylideneacetic acid (X) into 2-keto-trans-cyclohexylideneacetic acid semicarbazone (XI).

With II, diazomethane formed an addition product (XIII), which has been characterized by its phenylhydrazide, 2'-keto-cyclohexane-(1'-spiro-4)-pyrazoline-3-carboxylic acid phenylhydrazide [XIV, m.p. 166-167°, $\lambda_{max}^{Et,OH}$ 281 m (ε 18,500)].

The saponification of the lactone III resulted in the formation of sodium 2-hydroxy-cis-cyclohexylideneacetate, which gave s-benzylthiuronium 2-keto-cyclohexylacetate (XX, m.p. 168-169°, $\lambda_{max}^{Et,OH}$ 219 mμ (ε 6,400)] on reacting with S-benzylthiuronium hydrochloride. Reactions of III with benzylamine yielded 2-benzylimino-cyclohexylacetic

(continuation of Hua-hsueh Hsueh-pao, Vol 28, No 6, pp 351-363)

acid benzylamide (XXI, m.p. 112.5-113.5°), and, with methanol in presence of sodium methoxide, methyl 2-keto-cyclohexylacetate (XXII, m.p. 20.5-21.5°, b.p. 81-82°/0.08 mm, n_D^n 1.4611) only. These products have been identified by comparison with the corresponding substances prepared directly from 2-keto-cyclohexylacetic acid according to usual methods.

The above results show that the hypothetical 2-hydroxy-cis-cyclohexylideneacetic acid seems very easily to be isomerized into 2-keto-cis-cyclohexylideneacetic acid is not very active.

This paper was received for publication on 5 October 1960; this paper is a part of the thesis of HUANG Ching-chien (7806/2417/1017); the most important parts of this paper were read at the February 1959 meeting of the Shanghai Municipal Chemistry and Chemical Engineering Society.

Authors' Affiliation: Both of Institute of Organic Chemistry, Chinese Academy of Sciences.

HUANG Wei-yuan (7806/4850/0997)

"Further Characterization of the Two Compounds Isolated From Salacia Prinoides"

Peiping, Hua-hsueh Hsueh-pao (Acta Chemica Sinica), Vol 28, No 6, Dec 62, pp 365-371

Text of English Abstract: Compound B, the major component present in the Indian shrub, Salacia prinoides (DeCondolle), Celastraceae (Hippocrateaceae), was degraded further into a bisdesoxo derivative via dehydration of the known dihydrodesoxo compound followed by catalytic hydrogenation. Oxidative study of the dehydration product indicated that the dehydration was not accompanied by any rearrangement of the carbon skeleton. A couple of analogous derivatives of the other component, compound A, have been prepared. Chromatography on alumina column was shown to be a better and more clear-cut method of separation of the two components. The method was particularly suitable for the purification of Compound A.

This paper was received for publication on 21 March 1962.

(continuation of Hua-hsueh Hsueh-pao, Vol 28, No 6, pp 365-371)
Author's Affiliation: Institute of Organic Chemistry, Chinese Academy of Sciences.

KAO I-sheng (7559/1837/3932)
P'AN Pai-ch'uan (3382/4102/1557)

"Synthesis of Compounds Related to Chloramphenicol -- IV. 3-(O-hydroxy-p-nidrophenyl)-2-eichloroacetamido-protanol"

Peiping, Hua-hsueh Hsueh-pao (Acta Chemica Sinica), Vol 28, No 6, Dec 62, pp 372-377

Text of English Abstract: For further studying the relationships between antibacterial action and hydrogen bonding structure in compounds related to chloramphenicol, the authors have synthesized 3-(o-hydroxy-p-nitrophenyl)-2-dichloroacetamido-propanol (V), in which hydrogen bonding possibility was eliminated by converting the carbonyl group into methylene group.

The starting materials for the synthesis of V and its related compounds were o-acetoxy-p-nitrobenzyl bromide (VII) and o-methoxy-p-nitrobenzyl bromide (VIII). Compound VII was condensed with ethyl formamido-malonate in the presence of sodium ethoxide, and the product (IX) was hydrolyzed to o-hydroxy-p-nitrophenyl alanine (XI), which could also be prepared by hydrolyzing o-methoxy-p-nitrobenzyl-formamido-malonate (X) with hydrobromic acid. When compound X was hydrolyzed by

(continuation of Hua-hsueh Hsueh-pao, Vol 28, No 6, pp 372-377)
means of hydrochloric acid, o-methoxy-p-nitrophenyl alanine hydrochloride (XII) was formed, and the latter was then converted into its esters XV and XVI. These compounds were in turn converted to their acetyl (XIX, XX) or dichloroacetyl derivatives (XXI, XXII). Reduction of compounds XIX and XX with lithium aluminium hydride gave 3-(o-methoxy-p-nitrophenyl)-2-acetamido-propanol (XXIV), which gave XXVI on hydrolysis. The latter compound could also be prepared by reducing XV with lithium aluminium hydride. Compound XXVI reacted with methyl dichloroacetate to give 3-(O-methoxy-p-nitrophenyl)-2-dichloroacetamido-propanol (VI). o-Hydroxy-p-nitrophenyl alanine (XV) was converted to its derivatives (XIV), (XVII), and (XVIII) in the usual way. Compound XVIII, on reaction with lithium aluminium hydride, gave XXIII, which was then hydrolyzed to the corresponding amine hydro-chloride (XXV). The latter was converted to 3-O-hydroxy-p-nitrophenyl)-2-dichloroacetamido-propanol (V) by reacting with methyl dichloroacetate. When compound XVII was reduced with lithium aluminium hydride, compound V was also obtained.

The antibacterial test showed that the compound (V) was devoid of action against Staphylococcus aureus and E. Coli.

This paper was received for publication on 9 April 1962.

(continuation of Hua-hsueh Hsueh-pao, Vol 28, No 6, pp 372-377)
Authors' Affiliation: Both of Institute of Materia Medica, Chinese Academy of Sciences.

CHIANG Ming-ch'ien (5592/2494/6197)
LI Sen (2621/2773)

"Telomerization of Ethylene and Methyl Acetate"

Peiping, Hua-hsueh Hsueh-pao (Acta Chemica Sinica), Vol 28, No 6, Dec 62, pp 379-383

Text of English Abstract: The telomerization of methyl acetate with ethylene, using di-tert.-butyl peroxide, benzoyl peroxide, or azo-bis-iso-butyronitrile as initiator, has been studied. Experimental results show that di-tert.-butyl peroxide is much more efficient than benzoyl peroxide and azo-bis-iso-butyronitrile.

For each of the three initiators mentioned, within the range from 0.12 to 4.6 moles of initiator for every mole of methyl acetate, the yield of the telomeric products increases almost linearly with the increase in the amount of the initiator used.

From the telomeric products produced with di-tert.-butyl peroxide as initiator, in addition to lower aliphatic acids of even carbon atoms, lauric, palmitic, stearic, and eicosanic acids have been isolated and identified. Besides the telometric esters, some unsaponificable substances have been obtained from the telomer mixture.

(continuation of Hua-hsueh Hsueh-pao, Vol 28, No 6, pp 379-383)
When azo-bis-iso-butyronitrile is used as initiator a considerable amount of a dimer of the free radicals of the decomposition of the initiator has been isolated. This fact indicates that a large portion of this initiator does not take part in the telomerization reaction, and consequently it results in a low initiator efficiency.

The authors express thanks to CHIANG I-k'uei (1203/0076/1145).

This paper was received for publication on 28 April 1962.

Authors' Affiliation: Both of Institute of Chemistry, Chinese Academy of Sciences.

CHOU Wei-shan (0719/4850/0810)
CHU Hei-hsiang (2612/1920/4382)

"Rearrangement of 3 B-Acetoxy-5a, 6 B-Dihydroxy-6a-Methyl-25 D-Spirostane"

Peiping, Hua-hsueh Hsueh-pao (Acta Chimica Sinica), Vol 28, No 6, Dec 62, pp 385-387

Text of English Abstract: 3-Acetoxy-5a, 6-dihydroxy-6a-methyl-25 D-spirostane (I) undergoes pinacol-pinacolone rearrangement on treatment with formic acid to give 3-acetoxy-5-methyl-A-homo-B-nor-25D-spirostan-4a-one (II).

This paper was received for publication on 23 February 1962.

Authors' Affiliation: Both of Institute of Organic Chemistry, Chinese Academy of Sciences; CHU now taking refresher course at Chemistry Department, Nanking University.

WU Chih-hao (0702/1807/6275)
HSU Hsueh-ch'eng (1776/1331/6134)

"Preparation of Some p-Terphenyl Derivatives"

Peiping, Hua-hsueh Hsueh-pao (Acta Chemica Sinica), Vol 28, No 6, Dec 62, pp 388-390

Text of English Abstract: 2-Methyl perphenyl, 4-methyl perphenyl and 4-isoprotyl perphenyl have been prepared by the Ullmann reaction.

The authors express thanks to CH'EN Hui-o (7115/1979/1230) for his work in the organic analysis of the elements analysis.

This paper was received for publication on 13 April 1962.

Authors' Affiliation: Both of Institute of Chemistry, Chinese Academy of Sciences.

HSU Li-hsin (1776/4409/8590)
CHOU P'ung-hui (0719/0681/1920)

"Spectrophotometric Determination of 11-Oxo-tigogenin"

Peiping, Hua-hsueh Hsueh-pao (Acta Chimica Sinica), Vol 28, No 6, Dec 62, pp 391-393

Text of English Abstract: A method for the determination of 11-oxo-tigogenin has been proposed, consisting of paper chromatographic separation and subsequent treatment with concentrated sulfuric acid after elution of the spot. The resulting mixture is then determined spectrophotometrically.

Spot in duplicate small volumes of a chloroform solution of the sample (ca. 100-400μg) on Whatman No 1 paper (35 cm long). Put it into the chromatographic chamber, saturate for a few hours with the lower phase of a mixture of petroleum ether (30-60° C)-toluene-ethanol-water (40:10:1:9), and develop the chromatogram with the organic phase, using ascending technique. After 2 hours, take the paper out, dry and cut off a strip, and spray with an ethanolic solution of 2% p-hydroxybenzaldehyde. Locate the yellow spot of 11-oxo-tigogenin and cut out the corresponding position on the remaining paper. Elute with chloroform. Collect about one ml of the dripping liquid in a small beaker

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beneath the paper. Evaporate, dissolve in a small amount of concentrated sulfuric acid, transfer to a 10 ml volumetric flask. Wash the beaker with sulfuric acid, add the washings to the volumetric flask, and dilute to the mark. Mix well and put in an 80° C oven for 60 minutes. Cool to room temperature and measure the optical density at 400 m, using a similarly treated filter paper as the blank. Calculate the amount of 11-oxo-tigogenin from a calibration curve.

This paper was received for publication on 23 May 1962.

Authors' Affiliation: Both of Institute of Materia Medica, Chinese Academy of Sciences.

CHOU Wei-shan (0719/4850/0810)
HUANG Ta-chung (7806/1129/0022)
HUANG Ming-lung (7806/7686/7893)

"Synthesis of C_6Methylene Steroid"

Peiping, Hua-hsueh Hsueh-pao (Acta Chimica Sinica), Vol 28, No 6, Dec 62, pp 394-397

Text of English Abstract: Reaction of 3B-acetoxy-5a, 6a-oxido-6B-methyl 25-D-spirostan (III) with p-toluene sulphonic acid in benzene affords C_6 methylene compound (IV) and by-products V, VIa, VIb, and VII. The structure of IV has been elucidated.

This paper was received for publication on 7 August 1962.

Authors' Affiliation: All of Institute of Organic Chemistry, Chinese Academy of Sciences.

HUANG Ming-lung (7806/7686/7893)
CH'EN Yu-ch'un (7115/3022/5028)

"Synthesis of 16a-hydroxy-16β-Methylpregnenes"

Peiping, Hua-hsueh Hsueh-pao (Acta Chemica Sinica), Vol 28, No 6, Dec 62, pp 398-400

Text of English Abstract: Modified Kishner-Wolff reduction of 16a,17a-epoxy-16β-methyl-Δ^5-pregnene 3β-ol-20-one (IIb) afforded a mixture of two 16β-methyl-$\Delta^{5,17,(20)}$-pregnadien-3β,16a-diols IVa + IVb geometrically isomeric at C17-20. The structure of those compounds were proved by hydrogenation to compound V, dehydration to compound VIa, oxidation to compounds VIIa and VIIb, and ozonization to yield acetaldehyde.

This paper was received for publication on 17 August 1962.

Authors' Affiliation: Both of Institute of Organic Chemistry, Chinese Academy of Sciences.

CHANG Huan-ch'iao (1728/3562/0829)

"Resolution Width of a Neutron Spectrograph of Plane Crystal"

Peiping, Wu-li Hsueh-pao (Acta Physica Sinica), Vol 19, No 8, Aug 63, pp 477-482

Excerpts of Chinese Abstract: This paper analyzes the resolution width of a neutron spectrometer of plane crystal and discusses briefly several kinds of common circumstances. The paper also provides formulas for the approximation of the resolution width and the half-width of the oscillation curve of the crystal.

TAI Chuan-tseng (2071/0278/2582) advised and directed the work.

This paper was received for publication on 7 November 1962.

YU Yu-wen (0151/0645/2429)
CHANG Tsung-yeh (1728/1350/8763)
YU Min (0060/2404)

"A Fermi System Having Equal Interval Energy Spectrum"

Peiping, Wu-li Hsueh-pao (Acta Physica Sinica), Vol 19, No 8, Aug 63, pp 483-502

Excerpts of Chinese Abstract: This paper proposes a model system of N Fermions. In this system, each particle has three degrees of freedom (angles theta, phi, and spin). The structure of the low levels of this model was obtained. Their characteristics and physical representation were examined. A comparison demonstrated that the characteristics of this model are qualitatively similar to those of an atomic nucleus with equal interval energy spectrum.

This paper was received for publication on 31 December 1962.

P'U Fu-k'o (5543/1381/1870)
CHENG Ch'ing-ch'i (6774/1987/2759)

"The s-f Interaction of Rare-Earth Metals"

Peiping, Wu-li Hsueh-pao (Acta Physica Sinica), Vol 19, No 8, Aug 63, pp 503-522

Text of English Abstract: Using the algebraic method of the theory of angular momentum in quantum mechanics, a detailed study is made for the model of s-f interaction of rare-earth metals. A general form of Hamiltonian of s-f interaction is derived. Utilizing the method of the theory of perturbation in operator form, we have obtained the general expression for the effective Hamiltonian of f-f interaction through s-f interaction. Retaining terms to the second order of smallness, besides the isotropic exchange interaction, the pseudo-dipole interaction is obtained. On the basis of the results obtained, we have discussed preliminarily the magnetic crystalline anisotropy of the ferromagnetic phase of rare-earth metals. Some experimental facts which might be explained by the above results are indicated.

This paper was received for publication on 4 February 1963.

WENG P'ei-k'un (5040/1014/3540)
YEN Kuo-kuang (0917/0948/0342)
CHU Shan-ken (2612/0810/2704)
CH'EN Shih-p'ing (7115/1597/1627)
HO Hsien (0149/2009)
WANG Shu-fang (3769/3359/5364)
CHENG Lin-sheng (6774/2651/3932)

"Disintegration of Tb^{100} -- Investigation of Excitation Levels of Strongly Deformed Nuclei of Rare-Earth Elements (III)"

Peiping, Wu-li Hsueh-pao (Acta Physica Sinica), Vol 19, No 8, Aug 63, pp 524-536

Excerpts of Russian Abstract: This paper investigates the radioactive decay of the Tb nucleus (half life of 72 days) with the aid of a twin lens magnetic beta-spectrometer, a magnetic-beta spectrometer with twin-focusing (with iron), and scintillation methods. Five beta-branches were determined. Twenty-seven gamma-transitions were also determined. Of these, nine with higher energies were observed for the first time. According to data on gamma-gamma cascade correlation and gamma-transition energies, 14 excitation states were established for

(continuation of Wu-li Hsueh-pao, Vol 19, No 8, pp 524-536)
the Dy^{160} nucleus, and their characteristics and nature were studied.

SU Hung-yuan (5685/1347/3220) carried out the chemical isolation work.

This paper was received for publication on 27 February 1963.

KUANG Yu-p'ing (6782/1342/1627)
I Yu-p'ing (2496/0151/5493)

"The Quantum Theory of Ferromagnetism"

Peiping, Wu-li Hsueh-pao (Acta Physica Sinica), Vol 19, No 9, Sep 63, pp 541-559

Text of English Abstract: By taking account of the noninteger number of d electrons per atom and the intra-atomic interactions of electrons, a quantum theory of ferromagnetism is given. The spontaneous magnetization and the magnetic anisotropic constant K_1 in the whole temperature range are calculated by using the method of double-time Green's functions in statistical mechanics. The results obtained are better than that of the simple Heisenberg's model. The properties of the tempera-dependence of K_1 may be explained qualitatively.

This paper was received for publication on 27 February 1962; a revised paper was received on 28 December 1962.

CHOU Chieh-hsiang (0719/0094/3276)
P'AN Shih-lin (3383/4258/7792)
SUN Wei-ying (1327/4850/3853)
TUNG Mei-lung (2639/5019/7893)

"Derivation of New and Known Equalities in the Direct Method of Structural Analysis"

Peiping, Wu-li Hsueh-pao (Acta Physica Sinica), Vol 19, No 9, Sep 63, pp 560-565

Text of Russian Abstract: Known equalities by Sayre and Weinstein, as well as new, more general formulas of the type of equality by Weinstein and others, were derived with the aid of F-functions. It was demonstrated that this method has a more general character in comparison with others. The obtained formulas were compared with published data. The possibility of their practical application was considered.

The authors express thanks to CHU Yu-chen (2612/5940/6297), WANG Yuan (3076/0997), CH'EN Ming-ch'in (7115/7686/3830), P'AN Sheng-hsien (3382/5110/8300), FU Tsu-ken (4569/4371/2704), et al., for their assistance and corrections.

(continuation of Wu-li Hsueh-pao, Vol 19, No 9, pp 560-565)
This paper was received for publication on 7 September 1962.

Authors' Affiliation: All of Chemistry Department, Futan University.

YU Chueh-pang (5713/0628/6721)

"Analysis of a Two-Stroke Oscillator Model Having the Goodwin Characteristic"

Peiping, Wu-li Hsueh-pao (Acta Physica Sinica), Vol 19, No 9, Sep 63, pp 567-582

Excerpts of English Abstract: A Le Corbeiller Oscillator having the Goodwin characteristic is one of the simplest two-stroke oscillator model; its periodic process was discussed by Le Corbeiller and de Figueiredo with the help of a Lienard construction.

In this paper, the above problem is approached from analytic ways. It starts from the Lord Rayleigh type equation. The author uses the point-transformation and successor-function theory.

The analytic expressions of the period and wave form for stable periodic solution are also given.

This paper was received for publication on 18 September 1961, the first revised draft was received on 31 August 1962, and the second revised draft was received on 24 October 1962.

(continuation of Wu-li Hsueh-pao, Vol 19, No 9, pp 567-582)
Author's Affiliation: Ch'eng-tu Telecommunications Engineering College.

CH'IU Tsu-wen (5941/4371/2429)
WANG Wen-yun (3769/2429/7301)
CHANG Shou-hsin (1728/1343/0207)

"The Electron Spin Resonance Spectra of Aromatic Ions"

Peiping, Wu-li Hsueh-pao (Acta Physica Sinica), Vol 19, No 9, Sep 63, pp 583-598

Text of English Abstract: In this article, about 30 aromatic ions have been studied with the EPR-2 975 Kc high frequency modulation spectrometer. Most of them show well-resolved hyperfine patterns. Part of them are compared with the theoretical hyperfine patterns deduced from the McConnell's o-pi configurational interaction theory and Huckel L. C. A. O. -- M. O. Theory. The coincidents between experimental and theoretical patterns is considered to be satisfactory.

The authors express thanks to HSU Yuan-chih (1776/0337/2784) and LI Ying-ju (2621/5391/0320) for their assistance in the preparation of the negative ions; to CHIANG I-chin (3068/1355/6651) and HSU Cheng-yen (1776/2973/3508) for their assistance with the EPR-2 machine.

This paper was received for publication on 10 December 1962.

LI Yin-yuan (2621/5593/6678)
FANG Li-chih (2455/0536/0037)
KU Shih-chieh (7357/0037/2638)

"Effect of Imperfections on Spin Waves in Ferromagnets"

Peiping, Wu-li Hsueh-pao (Acta Physica Sinica), Vol 19, No 9, Sep 63, pp 599-612

Text of English Abstract: A general theoretical approach is developed to treat the effect of point imperfections on the spin waves in a ferromagnetic crystal. Special attention is paid to the formation of localized modes. As an example, the calculations have been carried out for a one-dimensional linear lattice. The main results obtained indicate the following features. A substitutional magnetic impurity atom may introduce more than one localized mode of spin waves. The conditions for the localized modes to appear and the positions of their energy levels are given in terms of J', S'/JS and J'/J. Here S'nS are, respectively, the spin quantum number of the impurity and that of the normal atom. J'nJ are, respectively, the exchange integral between an impurity and its neighbors and that between the normal neighboring atoms. Highly concentrated strains and interstitial atoms which cause

(continuation of Wu-li Hsueh-pao, Vol 19, No 9, pp 599-612)
the exchange interaction between the atoms in their neighborhood to increase lead also to the formation of localized modes. Furthermore, the dipole-dipole interaction has been taken into consideration with the conclusion reached that it should not destroy the existence of these localized modes. Discussions have been given to the discrete energy levels which appear below the continuous spectrum in case of J' 0. It is pointed out that the Holstein-Primakoff approximation adopted in the present work is not quite legitimate for certain cases in which on one or more atoms the spin deviation becomes not very much smaller than two S or two S'.

This paper was received for publication on 5 February 1963.

Authors' Affiliation: All of Institute of Physics, Chinese Academy of Sciences.

CHENG Ts'eng-t'ung (6774/2582/0681)

"Representation of Linear Functionals by Integrals and the Weak Convergence of Measures"

Peiping, Scientia Sinica, Vol 12, No 12, Dec 63, pp 1769-1778

Abstract of English Article: This paper first states some definitions and known results concerning topological metric space. The authors start from a set (not necessarily with a topological structure) and a family of functions on it and deduce three theorems which generalize three known points. In proving a fourth theorem, the authors generalize a well-known result of Kolmogorov and Prokhorov, concerning the weak convergence of measures on a topological measurable space.

This paper was first published in Chinese in Chung-shan Ta-hsueh Hsueh-pao Tzu-jan K'o-hsueh (Acta Scientiarum Naturalium, Universitatis Zhong-shan), No 4, 1962, pp 32-41.

Author's Affiliation: Chung-shan University.

YUEH Ching-chung (1471/2529/0022)

"Cohomology Mod p of Deleted Cyclic Product of a Manifold"

Peiping, Scientia Sinica, Vol 12, No 12, Dec 63, pp 1779-1794

Excerpts of English Article: This paper determines the complete cohomology mod p of the deleted cyclic product M^*_δ of the manifold M in an explicit form, in terms of the cohomology operations $Q^i: H^*(M) \to H^*(M)$. The results obtained in this paper show that the cohomology mod p of M^*_δ can be determined completely by those of M and the dimension of M. It is similar for the group $H^*(M^p_\pi/M)$, which was introduced by WU Wen-tsun in order to study the immer ion problems. Next, by means of the structure of groups $H^*(M^*_\delta)$ and $H^*(M^p_\pi/M)$, the author proves that the imbedding classes $\phi^s_p(M)$ and the immersion classes $\psi^s_p(M)$ of the manifold M are determined completely, in an explicit form, by the normal Stiefel-Whitney-Wu classes $\overline{W}^i_p$ of M. Finally, the author obtains a set of equivalent conditions concerning the classes $\overline{W}^i_p$, $\phi^i_p(M)$, $\psi^i_p(M)$ and the cohomology operations in M.

References: One of the four works by WU Wen-tsun, listed in the bibliography, is titled "A Theory of Imbedding and Immersion in Euclidean Spaces," published in Peiping in 1957.

(continuation of Scientia Sinica, Vol 12, No 12, pp 1779-1794)
This paper was received for publication on 11 January 1963.

Author's Affiliation: Institute of Mathematics, Chinese Academy of Sciences.

ORGANIZATIONS AND CONFERENCES

1. The Chemical Society of China Holds 1963 Annual Conference

From 30 July to 7 August 1963, the Chemical Society of China held its annual conference. A total of 250 persons attended, including representatives of various branch societies, the board of directors of the main society, and persons who submitted papers and reports.

The annual meeting was divided into two parts: a meeting on scientific papers and reports and a congress of society personnel.

The meeting on scientific papers and reports was divided into five groups concerned with four subjects: inorganic chemistry, analytical chemistry, organic chemistry, and physical chemistry (organic chemistry was divided into two groups). A total of 144 papers were reported at the conference, including 6 comprehensive papers on special subjects. The papers on organic chemistry were relatively more numerous. (Peiping, K'o-hsueh T'ung-pao, No 9, 1963, p 72)

2. Conference on Structural Cracks

From 22 June to 1 July 1963, a special committee on structure from the Chinese Civil Engineering Society and the Chinese Architectural Society held a conference on the problem of structural cracks. The committee inquired into the causes, characteristics, and dangerous nature of cracks occurring in various types of structures, from the standpoint of construction, labor, materials, scientific research, and various other phases.

The conference first brought up the appeal for measures to prevent and reduce cracks, methods of disposition, and measures for enforcement.

The conference was divided into three groups which probed deeply into analytic research of wire mesh concrete beam structures (the most important of which is the thin webbed girder), truss-type structures, and mixed structures. The conference also combined the problems of salts containing chlorine in cement with the influence on cracks in structural parts. (Peiping, K'o-hsueh T'ung-pao, No 10, 1963, p 71)

3. Chinese Medical Association Holds Board Meeting

The Chinese Medical Association held an enlarged meeting of its Standing Board of Directors on 22 June 1963. It was the second such meeting of the year. Forty-seven persons, including board members in Peiping and interested specialists, attended the meeting to hear reports on the association's recent activities and to consider preparations for the National Conference on Surgery scheduled for September 1963.

FU Lien-chang (0265/6647/8517), presiding, reported the following recent developments: (1) various local chapters of the association /previously known by other names/ have readopted the name of the association; (2) the association has resumed publication of 14 journals. FU also announced the association's intention to invite 13 Asian nations to send delegates to the China National Conference on Surgery, to be held in September.

Board member HUANG Chia ssu (7806/1367/7475) reported on conferences recently held by the Wuhan, Sian, and Tientsin chapters on abdominal, traumatic, and cardiovascular surgery, respectively. WU Chieh-p'ing (0702/7132/1627), board member, reported on a urologic surgery conference held by the Liaoning Chapter. CHU Kuei-ch'ing (2612/6311 /0615), another board member, reported on the National Tuberculosis Conference which was convened in Shanghai under the joint sponsorship of the Tuberculosis Society of the Chinese Medical Association and the China Antituberculosis Association. YEN Ching-ch'ing (0917/6976/3237), also a board member, reported on the China National Conference on Epidemiology of Infectious Enteric Diseases which was recently held in Hankow. Prof CHANG Wei-hsun (1728/3555/6676) gave a report on the Tenth Cuban Medical Conference which he attended in February 1963 on the invitation of the Cuban Ministry of Health. (Peiping, Chung-hua Wai-k'o Tsa-chih /Chinese Journal of Surgery/, Vol 11, No 8, Aug 63, p 684)

4. Hydraulic Engineering Conference

The Chinese Society of Hydraulic Engineering recently held a comprehensive scientific and technical symposium in Peiping. The conference was held at the same time as the Second National Congress of the Chinese Society of Hydraulic Engineering. More than 200 representatives of various areas and experts participated. A total of 167 papers were submitted on subjects such as electrical drainage and irrigation, hydraulic construction projects, and experimental observation tests. (Peiping, Kuang-ming Jih-pao, 24 Nov 63, p 1)

5. Hydraulic Engineering Conference

The Kwangtung Provincial Society of Hydraulic Engineering recently held its first scientific and technical annual meeting. The authors of the 59 papers submitted came from provincial technical administration, scientific, and technical research departments and from hydroelectric departments throughout the province. (Canton, Chung-kuo Hsin-wen, 14 Nov 63, p 11)

6. Catalyst Conference

The Chinese Academy of Sciences recently sponsored the Second National Catalyst Work Reports Conference in Lanchow. More than 120 persons from production teams, higher-level colleges and scientific research organs throughout the country participated. Nearly 100 papers and research reports were submitted. (Peiping, Kuang-ming Jih-pao, 29 Nov 63, p 2)

7. 1962 Activities of the Kiangsi Provincial Medical Association

Highlights of the 1962 activities of the Kiangsi Provincial Medical Association (I-yao Wei-sheng Hsueh-hui 6829/5522/5898/3932/1331/2585) and its member societies are reviewed in the source given below.

The number of medical papers presented during the year in the annual meetings of the Nursing, Pharmacology, and Chinese Traditional Medical Societies, as well as in the Provincial Conference on Control of Scalp Ringworm, totaled 242. Two hundred and twenty-five medium and small-scale medical conferences were conducted in Nan-chang by 18 of the association's member societies in the following specialties: internal medicine, surgery, gynecology, pediatrics, ophthalmology, otorhinolaryngology, dermatology, stomatology, medical technology, tuberculosis, hygiene, radiology, Chinese traditional medicine, obstetrics, pharmaceutics, microbiology, anatomy, and physiology. From 10 to 25 such conferences were held monthly during the year.

In organizational matters, the societies of Obstetrics, Stomatology, and Anatomy, respectively, elected new officers; and two new member components were established: the Society of Chinese Traditional Medicine and the Health Statistics Group. (Peiping, Chung-hua

I-hsueh Tsa-chih [National Medical Journal of China], Vol 49, No 6, Jun 63, p 355) (CONFIDENTIAL)

8. 1962 Annual Meeting of Hunan Provincial Medical Association

The 1962 annual meeting of Hunan Provincial Medical Association (I-yao Wei-sheng Hsueh-hui) was held in Ch'ang-sha on 14 January 1963, under the auspices of the Provincial Public Health Bureau. Among those who attended were 277 delegates of the provincial association and 130 guests representing the military, the railroads, and industry.

The meeting received 386 medical papers of which 11 were read at general sessions and 221 were read during group sessions.

In general the papers read reported advances in medical practice. For example, the Hunan Cardiovascular Research Group presented data on animal experimentation and clinical research conducted during the past few years. The Second Hospital of Hunan Medical College summed up its experiences since 1958 on the excision of considerable portions of the liver and introduced a method of resection involving matters suturing and blunt dissection of the liver. Reported by KUO Chen-ch'iu (6753/2182/3808), Hunan Chinese Traditional Medical College. (Peiping, Chung-hua I-hsueh Tsa-chih /National Medical Journal of China/, Vol 49, No 6, Jun 63, inside back cover) (CONFIDENTIAL)

9. Medical Activities in Nan-chang

The following were among the topics discussed at a 1963 conference(s) of the local Medical Association of Nan-ch'ang, Kiangsi Province: physiology of recticular structures, congenital deformities of the heart, biochemical determination of acid-fast microorganisms, examination and diagnosis of hemorrhagic diseases, advances in the treatment of diabetes, the man's part in planned parenthood and contraception, extrathoracic heart massage, hyperthyroidism, vertebral fracture complicating segmental paralysis, implanted placenta, management of acute abdomen in children, observations on the long-range effects of thallium acetate in the treatment of scalp ringworm, radiography of aorta and renal arteries and its value in diagnosis of hypertension, advances in treatment of tracoma, review of the literature on stomatology, methods for detecting and determining toxic substances, and modern methods of oxygen administration. (Peiping, Chung-hua I-hsueh Tsa-chih /National Medical Journal of China/, Vol 49, No 6, Jun 63, p 392) (CONFIDENTIAL)

10. Hunan Conference on Otorhinolaryngology

The Otorhinolaryngology Section of the Honan Provincial Medical Association held its 1962 annual conference on 25 February 1963 in Hsin-hsiang, Honan Province, with 45 persons attending. Thirty-six out of 53 medical papers received were read in an interchange of research and practical experiences in otorhinolaryngology. The papers which were read and discussed concerned the following among other topics: bacteriostasis in suppurative inflammation of the middle ear, surgical treatment and management of intracranial complications, radiography of the middle ear, basic research on rhinitis and sinusitis and surgical treatment, surgical treatment for otolaryngeal fibroangiomas, and treatment for functional aphasia and for foreign body in the esophagus. (Peiping, Chung-hua I-hsueh Tsa-chih /National Medical Journal of China/, Vol 49, No 6, Jun 63, inside back cover) (CONFIDENTIAL)

11. Meeting on Agricultural Hygiene

More than 70 health workers in Peiping attended a meeting on agricultural hygiene, which was held on 3 April 1963 under the sponsorship of the Peiping Chapter of the Chinese Medical Association. The meeting featured a report, entitled "Several Immediate Problems in Agricultural Labor Hygiene," which was delivered by CHANG Fu-jui (1728/4395/3843), a physician at the Institute of Labor, Environmental, and Nutritional Hygiene of the Chinese Academy of Medical Sciences.

CHANG's report, which is reviewed in the source given below, pointed out the following as major concerns in agricultural hygiene: diseases arising from contact with domestic animals and the soil, rational application and control of agrochemicals and toxicology, heat prostration, and the etiology and prevention of paddy dermatitis. (Peiping, Chung-hua I-hsueh Tsa-chih /National Medical Journal of China/, Vol 49, No 6, Jun 63, p 363) (CONFIDENTIAL)

MANPOWER AND EDUCATION

1. Graduate Students Enrolled

This year Chungshan University, South China Engineering College, South China Agricultural College and Chungshan Medical College enrolled over 20 graduate students. The majority of them graduated in excellent standing this year from higher-level schools; the others are working cadres.

Higher-level schools in Kwangtung Province are actively preparing to enroll a greater number of graduate students for 1964 than in the previous year. Special courses include literature, science, engineering, agriculture, and medicine. (Canton, Chung-kuo Hsin-wen, 14 Nov 63, p 11)

2. Stomatology at Hupei Medical College

The Hupei Medical College Department of Stomatology is relatively new. The students who enrolled in that department when it was first instituted have just begun their third academic year. A Stomatology Hospital was inaugurated in May 1962 as a teaching hospital of that department. It treats both in-patients and out-patients. Professor HSIA Liang-ts'ai (1115/5328/2088) is head of the college department. Reported from Wuhan, 10 April 1963. (Peiping, Chung-hua I-hsueh Tsa-chih /National Medical Journal of China/, Vol 49, No 6, Jun 63, p 403) (CONFIDENTIAL)

NEW PUBLICATIONS AND BOOK REVIEWS

1. New Medical Publications

Previews of the following professional medical books, which are scheduled for publication in September-October 1963 by People's Medical Publishers, Peiping, appear in the source cited below:

Ma-tsui-hsueh (Anesthesiology), by HSIEH Jung (6200/2837); originally published in 1957, the book has been revised to include much new material.

Pi-niao Wai-k'o-hsueh (Urologic Surgery), by SHIH Hsi-en (2457/6932/1869) and WU Chieh-p'ing (0702/7132/1627). (Peiping, Chung-hua Wai-k'o Tsa-chih [Chinese Journal of Surgery], Vol 11, No 8, Aug 63, back cover)

2. Books on Radioactive Substances Announced

The following books published by People's Medical Publishers, Peiping, are announced in the source given below:

Fang-she Hua-hsueh chi Chih-liang Tse-liang Fang-fa Shou-ts'e (Handbook on Radiochemistry and Dosimetry), translated by LU Shih-chung (0712/0013/1813);

Fang-she-hsing Wu-chih Yun-shu Kuei-ch'eng (Rules and Regulations Governing Transportation of Radioactive Substances), translated from Russian by YUAN Tsung-hsin (5913/1350/0207);

Fang-she-hsing T'ung-wei-su Chi-liang-hsueh (Radioisotopic Dosimetry), translated by Lan-chou Medical College;

Tien-li-fang-she tui Mien-i ti Ying-hsiang (Effect of Ionizing Radiation on Immunity), translated by WANG Yu-min (3769/3768/3046);

Fang-she-hsing-tien Chih-liao Chia-chuang-hsien-tu-cheng ti Ying-yung (The Application of Radioactive Iodine in the Treatment of Thyroidism), translated by CHANG Shu-hui (1728/3412/1979);

Fang-she-hsing Yuan-su tsai T'i-nei ti Hsu-chi ho P'ai-hsu (The Accumulation of Radioactive Elements in the Body and Their Elimination), translated by WU Te-ch'ang (0702/1795/2490);

Fang-she-hsing Wu-chih ti Tu-li-hsueh Wen-t'i (Problems on the Toxicology of Radioactive Substances), translated by LU Ju-shan (7120/1172/1472);

Fang-she-hsing T'ung-wei-su Kung-tso ti Lao-tung Wei-sheng (Labor Hygiene in Radioisotope Work), translated by SUN Pen-chih (1327/2609/1807);

Shih-yung Fang-she-hsing Wu-chih ho Chih-tien-li Fu-sha-yuan ti Wei-sheng Kuei-chang (Health Rules Governing the Use of Radioactive Substances and Sources of Ionizing Radiation), translated by JEN Min (0117/3046); and

Chi-su Sheng-wu Ho-ch'eng ho Tai-hsieh Yen-chiu-chung ti Fang-she-hsing Chih-shih-chi (Radioactive Indicators for Biosynthesis of Hormones and Metabolism Research), translated by CHENG Jen-min (4453/0088/3046). (Peiping, Chung-hua I-hsueh Tsa-chih /National Medical Journal of China/, Vol 49, No 6, Jun 63, back cover) (CONFIDENTIAL)

FOREIGN TRAVELS AND CONTACTS

1. Scientific Delegation to Hungary

On 27 November, a Chinese scientific and technical cooperation delegation, headed by SHEN Hung (3088/7703), vice-minister of the First Ministry of Machine Industry, left Peiping by air for Budapest to attend the eighth session of the China-Hungary Committee for Scientific and Technical Cooperation. (Peiping, Jen-min Jih-pao, 30 Nov 63, p 4)

2. China and Bulgaria Sign Cooperation Protocol

The Seventh Session of the China-Bulgaria Joint Committee on Scientific and Technical Cooperation was held on 18-26 November in Sofia. According to the terms of the protocol, which was signed on 26 November, China will render scientific and technical assistance to Bulgaria in chemistry, ferrous metallurgy, food and the construction industry; Bulgaria will assist China in agriculture, agricultural machinery manufacturing, and the construction industry.

The protocol was signed by WEI Chen-wu (7614/7201/0063), chairman of the Chinese delegation and Vice Minister of Agriculture; and Stoyan Syulemezov, chairman of the Bulgarian delegation and first vice-chairman of the State Plannning Committee. (Peiping, Jen-min Jih-pao, 28 Nov 63, p 3)

3. Delegation Leaves Moscow for Hungary

A Chinese high-level education delegation, under the leadership of SU Chuang (5685/5445), has concluded its visit to the Soviet Union. The delegation left Moscow by plane on 10 November 1963 for a visit to Hungary. (Peiping, Jen-min Jih-pao, 12 Nov 63, p 2)

BIOGRAPHIC INFORMATION

CHANG Ching-ling, Kazan Chemical-Technological Institute imeni S. M. Kirov; coauthor with A. Ye. Arbuzov of articles, "On the Interaction of Some Substituted Triarylhalomethanes With Dialkylphosphites: Report 1. Interaction Between p-Alkozubstituted Triphenylhalomethanes and Dialkylphosphites; Report 2. Study on the Interaction Between Halosubstituted Triphenylhalomethanes and Dialkylphospites; Report 3. Interaction Between Crystalline Triphenylchloromethane and Diethylphosphorous Sodium," in Russian; received for publication on 13 August 1962. (Moscow, Izvestiya Akademiya Nauk SSSR, Seriya Khimicheskaya, No 11, Nov 63, pp 1934-1941, 1941-1944, and 1945-1946)

CHANG Hou-sheng, Moscow State University; coauthor with A. A. Balandin, A. I. Kukina, and I. Ya. Kosinskaya of article, "Contact Conversion of Cyclohexane and Cyclohexa-1,3-Diene in the Presence of Alpha-Iron," in Russian; received for publication on 11 January 1963. (Moscow, Akademiya Nauk SSSR, Zhurnal Fizicheskoy Khimii, Vol 37, No 11, Nov 63, pp 2504-2511)

CHAO Yu (6392/3842), Neuropsychiatry Teaching and Research Section of Soochow Medical College; author of an article, "The Use of Urea in the Treatment of Increased Intracranial Pressure," which surveys the literature. (Peiping, Chung-hua Wai-k'o Tsa-chih [Chinese Journal of Surgery], Vol 11, No 8, Aug 63, pp 678-691)

CH'EN Chung-san (7115/1813/0005), Surgery Teaching and Research Section, Szechwan Medical College; author of an article reporting two cases of nonspecific ulcer of the cecum. (Peiping, Chung-hua Wai-k'o Tsa-chih [Chinese Journal of Surgery], Vol 11, No 8, Aug 63, pp 676-677)

CH'EN Kung-pao (7115/0361/4101)
CHU Chih-p'ing (4234/3112/1627)
T'ANG Chen-shang (0781/6966/3932)
CHANG Fu-lin (1728/4395/2651)

All of Shanghai First Medical College; coauthors of an article, "Surgical Removal of Tetroma in Region of Pineal Body." (Peiping, Chung-hua Wai-k'o Tsa-chih [Chinese Journal of Surgery], Vol 11, No 8, Aug 63, pp 629-632)

CH'ENG Chun-ch'ing (2052/0193/0615)
LI Yuan-che (2621/3293/0772)
SUN Ch'eng-chih (1327/2052/1807)

All of Institute of Wood Industries, Chinese Academy of Forestry Sciences; coauthors of an article, "Comparative Studies on the Wood Properties of the Plantation and Natural-Grown Korean Pines in the Northeastern Forest Region of China." (Peiping, Lin-yeh K'o-hsueh /Scientia Silvae/, Vol 8, No 3, Jul 63, pp 195-212)

CH'ENG Kuang-yueh, Moscow Chemical-Technological Institute imeni D. I. Mendeleyev and Szechwan University; coauthor with M. Kh. Karapet'yants of article, "Methods for Calculating the Properties of Substances in Polar Coordinates: 2. Temperature Dependence of Gases on Isobaric Heat Capacity," in Russian; received for publication on 14 January 1963. (Moscow, Akademiya Nauk SSSR, Zhurnal Fizicheskoy Khimii, Vol 37, No 11, Nov 63, pp 2577-2580)

CHIA Ming-yu (6328/6900/6877), Nanking Forestry College; author of an article, "A Primary Study on Floatability of Wood." (Peiping, Lin-yeh K'o-hsueh /Scientia Silvae/, Vol 8, No 3, Jul 63, pp 256-263)

CHOU Kung-tu (0719/0361/1653)
HU Hsing-chou (5170/5281/3166)
YU Ta-chun (0151/1129/0689)

All of the Chemistry Department, Peking University; coauthors of article, "The Crystal Structure of Sodium Biselenite," in English; received for publication on 21 August 1963. (Peiping, Scientia Sinica, Vol 12, No 12, Dec 63, pp 1938-1940)

CH'U Hsien-ch'iu (5969/0103/4428)
YU Te-ch'ang (0060/1795/2490)

Both Associates in Surgery, First Hospital of Dairen Medical College; coauthors of an article, "Clinical Observations on Neuroblastomas and Prognosis." (Peiping, Chung-hua Wai-k'o Tsa-chih /Chinese Journal of Surgery/, Vol 11, No 8, Aug 63, pp 665-668)

CHUANG Ch'en-kan (5445/6891/1626)
FANG Ta (2455/6671)

Both associates in Surgery, Shanghai Eighth Municipal Hospital; coauthors of an article, "Report of a Case of Schistosomiasis Affecting the Pancreas." (Peiping, Chung-hua Wai-k'o Tsa-chih [Chinese Journal of Surgery], Vol 11, No 8, Aug 63, p 668)

HSU Ch'ang-sheng (1776/7022/3932)
YANG Chih-liang (2799/1807/5328)

Both members of the General Surgery Teaching and Research Section of Shanghai Chinese Traditional Medical College and also associates in Surgery, Lung-hua Hospital of Shanghai Traditional Medical College; coauthors of an article, "Report of a Case of Multiple Intussusception." (Peiping, Chung-hua Wai-k'o Tsa-chih [Chinese Journal of Surgery], Vol 11, No 8, Aug 63, p 675)

HSU Hua-ch'eng (1776/0553/2052), Peking Forestry College
CHENG Chun-pao (6774/0971/1405), School of Horticulture, Hopeh Agricultural University

Coauthors of an article, "Research on the Natural Regeneration of Pinus Tabulae formis in the Ch'eng-te (2110/1795) Area, Hopeh Province." (Peiping, Lin-yen K'o-hsueh [Scientia Silvae], Vol 8, No 3, Jul 63, pp 223-236)

HU T'ing-tse (5170/1694/3419), associate in Surgery, Szechwan Medical College Hospital; author of an article, "Sarcrococcygeal Teratoma," which is based on an analysis of eight cases. (Peiping, Chung-hua Wai-k'o Tsa-chih [Chinese Journal of Surgery], Vol 11, No 8, Aug 63, pp 673-675)

HUANG Hua-min, Moscow State University; coauthor with N. P. Shusherina and R. Ya. Levina of article, "Delta-Lactones and Delta-Lactams 34. Catalytic Conversion of Delta-Ketononitriles," in Russian; received for publication on 27 October 1962. (Moscow-Leningrad, Zhurnal Obshchey Khimii, Vol 33, No 11, Nov 63, pp 3613-3617)

HUANG Hung-shu, Institute of Plant Physiology imeni K. A. Timiryazev, Academy of Sciences USSR; coauthor with Ye. I. Ratner, A. M. Smirnov, S. F. Ukhina, and I. N. Kuzovkina of article, "Assimilation of Amino Acids as a Nitrogen Source by Isolated Alfalfa Roots and Whole Pea Plants in Sterile Cultures," in Russian; received for publication on 9 June 1962. (Moscow, Akademiya Nauk SSSR, Fiziologiya Rasteniy, Vol 10, No 6, 4 Nov 63, pp 673-680)

HUANG Lin, author of new book, "Ob Otsenke Vremeni Zatukhaniya" (Estimation of the Time of Damping), in Russian; 25 pages; published in Moscow in 1963. (Moscow, Knizhnaya Letopis', No 10, 31 Oct 63, p 101)

KU Tzu-p'ing (0657/1311/1627), Medical Team of T'ung Autonomous Ch'u of Kwangsi Province; author of an article reporting two cases of simple osteoneurofibroma. (Peiping, Chung-hua Wai-k'o Tsa-chih [Chinese Journal of Surgery], Vol 11, No 8, Aug 63, p 615)

LI Ch'eng-ch'iu (2621/2110/3808)
HAN Tsu-pin (2781/4371/2430)

Both associates in Osteology, Nanking Municipal People's Ku-lou Hospital; coauthors of an article, "A Study on Early Diagnosis and Treatment for Acute Suppurative Arthritis With Analysis of 30 Cases." (Peiping, Chung-hua Wai-k'o Tsa-chih [Chinese Journal of Surgery], Vol 11, No 8, Aug 63, pp 647-649)

LI Hsin-shih (2621/2450/2514)
HSIANG Ya-ming (4161/0068/2494)

Both of Institute of Wood Industries, Chinese Academy of Forestry Sciences; coauthors of an article, "Initial Research on the Acidity of Wood." (Peiping, Lin-yeh K'o-hsueh [Scientia Silvae], Vol 8, No 3, Jul 63, pp 263-266)

LI Kuan-hua (2621/6034/5478), Department of Chemistry, Inner Mongolia Normal College, Huhehaote; author of article, "Evaluation of $PO_4 \equiv H_2O(I)$ Palaeotemperature Scale," in English; received for publication on 25 May 1963. (Peiping, Scientia Sinica, Vol 12, No 12, Dec 63, pp 1937-1938)

LI T'ieh-i (2621/6993/0001)
YANG Cheng-hsing (7122/2973/2502)
HU Lin (5170/3829)

All of the Peking Sino-Soviet Friendship Hospital; coauthors of an article, "Report of a Case of Spinal Subperiosteal Osteoclastoma." (Peiping, Chung-hua Wai-k'o Tsa-chih /Chinese Journal of Surgery/, Vol 11, No 8, Aug 63, pp 643-646)

LIANG Tzu-ch'un, Moscow State University; author of dissertation for the scientific degree of Candidate of Biological Sciences, "The Effect of Water and Potassium and Calcium Ions on the Formation of Rest Potential," in Russian. (Moscow, Vechernyaya Moskva, 5 Nov 63, p 4)

LING Ch'ao-wen (0407/2600/2429), Forestry Section, Tientsin Research Institute of Rice Culture; author of an article, "Initial Research on Introducing Populus Euphratica Olivier in Coastal Salinated Areas in Northern China." (Peiping, Lin-ych K'o-hsueh /Scientia Silvae/, Vol 8, No 3, Jul 63, pp 248-255)

LIU Chang-wen (0491/3864/3306), Institute of Mathematics, Chinese Academy of Sciences; author of article, "A Method of Constructing Certain Symmetrical Partially Balanced Designs," in English; received for publication on 17 July 1963. (Peiping, Scientia Sinica, Vol 12, No 12, Dec 63, pp 1935-1936)

LIU Chen-p'eng (0491/2182/7720), author of an article, "Mass-Spectrum of the Barions," which was received for publication on 8 February 1962. (Peiping, Wu-li Hsueh-pao /Acta Physica Sinica/, Vol 19, No 9, Sep 63, pp 613-616)

LIU Ping-huan (0491/3521/1403), associate in Radiology, First Hospital of Harbin Medical University; author of an article, "Report of a Case of Pericardial Cyst." (Peiping, Chung-hua Wai-k'o Tsa-chih /Chinese Journal of Surgery/, Vol 11, No 8, Aug 63, p 609)

LIU Yu-min (0491/5148/3046)
YANG Chen-yu (2799/2182/3768)

Both of the Institute of Physiology, Chinese Academy of Sciences, Shanghai; coauthors of articles, "On Components of A-Waves of Human Electroretinograms," and "A Blue Sensitive Component of Scotopic B-Wave of Human Electroretinograms," in English; received for publication on 15 October 1963. (Peiping, Scientia Sinica, Vol 12, No 12, Dec 63, pp 1941-1943 and 1943-1944)

LU Kuo-jung, engineer; Leningrad Institute of Mining; coauthor with Sh. Kh. Kil'keyev of article, "Instrument for the Automatic Collection of Mine Air Samples," in Russian. (Moscow, Bezopasnost' Truda v Promyshlennosti, No 11, Nov 63, pp 19-20)

NI Che-ming (0242/0772/2494)
LIANG Shu-ch'uan (2733/2885/2938)

Both of the Institute of Chemistry, Chinese Academy of Sciences, Peiping; coauthors of the article, "Colorimetric Determination of Niobium as Niobium-N-benzoyl-N-phenylhydroxylamine-thiocyanate Complex," in English; received for publication on 8 October 1963. (Peiping, Scientia Sinica, Vol 12, No 12, Dec 63, pp 1940-1941)

PAI Kuang-ming (4101/1684/2494)
TS'AI Chen-t'ung (5591/2182/6639)

Associates in Neurosurgery, Hsuan-wu Hospital, Peiping; coauthors of an article, "Multiple Primary Intercranial Tumors With Report of Four Cases." (Peiping, Chung-hua Wai-k'o Tsa-chih /Chinese Journal of Surgery/, Vol 11, No 8, Aug 63, pp 638-640, 641)

PAI Kuang-ming (4101/1684/2494)
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Associates in Neurosurgery, Hsuan-wu Hospital, Peiping; coauthors of an article, "Extracranial Metastases of Spongioblastoma Multiforme and Oligodenbroglioma." (Peiping, Chung-hua Wai-k'o Tsa-chih [Chinese Journal of Surgery], Vol 11, No 8, Aug 63, pp 635-637, 642)

SHIH Heng (5230/1854), Associate in Surgery, Mukden Municipal Tuberculosis Hospital; author of a medical report of a case of ruptured auxiliary artery due to infection following plombage of plastic balls applied to sternal membrane. (Peiping, Chung-hua Wai-k'o Tsa-chih [Chinese Journal of Surgery], Vol 11, No 8, Aug 63, p 613)

T'ANG Chen-min (0781/2182/3046), Second People's Hospital of Wu-hu City; author of an article, "Report of a Case of Intussusception Complicated by Rupture of the Colon." (Peiping, Chung-hua Wai-k'o Tsa-chih [Chinese Journal of Surgery], Vol 11, No 8, Aug 63, p 640)

TS'UI Tsung-yang (1508/1350/0111)
FUNG Hsi-jui (1345/6932/3843)

Associates in Surgery, Tsou-p'ing Hsien People's Hospital, Shantung Province; coauthors of a case report on false nodules in the pancreas due to ascarid eggs. (Peiping, Chung-hua Wai-k'o Tsa-chih [Chinese Journal of Surgery], Vol 11, No 8, Aug 63, p 632)

WANG Pao-hua (3769/1405/5478), Associate in Neurosurgery, Tientsin Medical University Hospital; author of an article, "Diagnosis and Surgical Treatment of Cervical Intervertebral Disc Hernia." (Peiping, Chung-hua Wai-k'o Tsa-chih [Chinese Journal of Surgery], Vol 11, No 8, Aug 63, pp 643-646)

WEN Ming-hsing (2429/2494/2502)
HAN Ming (7281/2494)

Both Associates in Surgery, Hunan Medical College; coauthors of an article, "Epigastric Hernia," which is based on an analysis of 11 cases. (Peiping, Chung-hua Wai-k'o Tsa-chih [Chinese Journal of Surgery], Vol 11, No 8, Aug 63, pp 669-670)

WU Kuang-hsin (0702/0342/2450), Associate in Urology, Harbin Railway Central Hospital; author of an article, "The Use of the Internal Saphenous Vein in Operative Repair of the Urethra." (Peiping, Chung-hua Wai-k'o Tsa-chih /Chinese Journal of Surgery/, Vol 11, No 8, Aug 63, p 664)

WU Sung-ch'ang (0702/2646/2490)
WANG Chih-yang (3769/0037/3577)
YEN Chen-huan (0917/7201/1403)

All of Shanghai Chest Hospital; coauthors of an article, "Observations on the Functions of Transplanted Colon Sections and Their Significance in the Surgical Substitution of Colon for Esophagus." (Peiping, Chung-hua Wai-k'o Tsa-chih /Chinese Journal of Surgery/, Vol 11, No 8, Aug 63, p 652)

WU T'uan, Kiev State University; author of article, "On the Stability of the Solution of a Linear Differential Equation of the n-th Order With Variable Coefficients," in Ukrainian; received for publication on 29 June 1963. (Kiev, Dopovidi Akademiy Nauk Ukrayns'koy Radyans'koy Sotsialistichnoy Respubliki, No 11, Nov 63, p 1431)

WU Yu (2976/1342), author of an article titled "The Influence of Small Variations in the Shape of the Boundary on the Eigenvalue of a Partial Differential Equation." (Wu-li Hsueh-pao /Acta Physica Sinica/, Vol 19, No 8, Aug 63, pp 538-540)

YANG Shih, Central Scientific-Research Physicotechnical Laboratory, Academy of Sciences Armenian SSR; author of article, "On the Wave Theory of Spin Density," in Russian; received for publication on 24 May 1963. (Yerevan, Doklady Akademii Nauk Armyanskoy SSR, Vol 37, No 4, 4 Nov 63, pp 191-196)

YANG Yu-p'o (2799/3768/0980), Szechuan Provincial Institute of Forestry Science
HSU Jun-ch'ing (1776/3387/7230), Exploration and Design Academy, Szechuan Provincial Forestry Department
LI Ch'eng-piao (2621/2110/1753), Exploration and Design Academy, Szechuan Provincial Forestry Department
CHUNG Jung-sung (6945/2837/2646), Exploration and Design Academy, Szechuan Provincial Forestry Department

Coauthors of an article, "Research on the Regeneration of Pinus Yunnanensis in Yunnan and Szechuan Provinces." (Peiping, Lin-yeh K'o-hsueh /Scientia Silvae/, Vol 8, No 3, Jul 63, pp 238-247)

YEH P'ei-chung (5509/1014/1813), Nanking Forestry College; author of an article, "An Intergeneric Cross Between Chunninghamia and Cryptomeria." (Peiping, Lin-yeh K'o-hsueh /Scientia Silvae/, Vol 8, No 3, Jul 63, pp 214-221)

YIN Hung-chang (3009/1347/4545)
HUNG Yu-ch'un (1347/5148/5028)
CH'EN Yun-kang (3088/0336/6921)
WANG Mei-ch'i (3769/5019/3825)

All of the Institute of Plant Physiology, Chinese Academy of Sciences, Shanghai; coauthors of article, "Studies on Photophosphorylation: 13. Quenching of Chloroplast Florescence in the Presence of Different Photophosphorylation Systems," in English; received for publication on 19 October 1963. (Peiping, Scientia Sinica, Vol 12, No 12, Dec 63, pp 1945-1946)

CHANG Chen-kang (1728/2182/4854), author of an article, "Development Trends in the Modern Nitrogen Fertilizer Industry." (Shanghai, Hua-hsueh Shih-chieh /Chemical World/, Vol 17, No 2, Feb 63, pp 49-51) (CONFIDENTIAL)

CHANG Jung-che (1728/2837/0772), author of an article, "Safety Techniques in the Production of Superphosphate." (Shanghai, Hua-hsueh Shih-chieh /Chemical World/, Vol 17, No 2, Feb 63, pp 96-97) (CONFIDENTIAL)

CHANG Min-fu (1728/3046/1133), Dermatology Teaching and Research Section, Second Clinical College of Kirin Medical University; author of an article, "Preliminary Report on the Treatment of Fifty Cases of Rosacea," which was presented at the 1962 conference of the Chinese Society of Dermatology in Ch'ang-ch'un. (Peiping, Chung-i Tsa-chih /Chinese Traditional Medical Journal/, No 3, Mar 63, pp 17-18) (CONFIDENTIAL)

CHANG T'ieh-liang (1728/6993/2733)
TAI Ts'u (2071/6101)

Both associates in Radiology, Peking Union Hospital, Chinese Academy of Medical Sciences; coauthors of an article, "A Case of Cardia Ventricular Atonicity Complicated by Esophageal Carcinoma." (Peiping, Chung-hua I-hsueh Tsa-chih /National Medical Journal of China/, Vol 49, No 6, Jun 63, pp 373-374) (CONFIDENTIAL)

CHANG Yen-mou (1728/3601/6180), author of an article, "New Achievements in Steaming Techniques of Sulphite to Produce Paper Pulp." (Shanghai, Hua-hsueh Shih-chieh /Chemical World/, Vol 17, No 3, Mar 63, pp 119-121) (CONFIDENTIAL)

CHANG Yuan-lang (4545/0337/3809)
HU K'o-ying (6253/0344/5391)
TING Shu-te (0002/2579/1795)

Coauthors of an article, "New Vermifuge for Cattle -- Methyridine." (Shanghai, Hua-hsueh Shih-chieh /Chemical World/, Vol 17, No 3, Mar 63, pp 112-114) (CONFIDENTIAL)

CH'EN Chu-sheng (7115/7467/5116), author of an article, "New Developments in the Production Techniques of Amylase." (Shanghai, Hua-hsueh Shih-chieh /Chemical World/, Vol 17, No 5, May 63, pp 195-199)

CH'EN Min-heng (7115/2404/1854); author of an article, "Reverse Mixing and Distribution of Delay Time in Continuous Homogeneous Reactor." (Shanghai, Hua-hsueh Shih-chieh /Chemical World/, Vol 17, No 4, Apr 63, pp 185-186) (CONFIDENTIAL)

Dr CH'EN Tse-lin (7115/3419/7207)
Dr SHEN Tzu-yin (3088/5261/1438)
Dr TENG Hsueh-chia (6772/1331/1367)
Dr CHIANG Ch'un-hua (1203/2504/5478)
Dr T'ANG Chi-fu (0781/0679/3637)
Dr SU Tu-hsien (5685/6236/6343)
Dr HU An-pang (5170/1344/6721)
Dr LI Wen-chieh (2621/2429/2638)
Dr SHENG Meng-hsien (4141/1125/0103)
Dr HUANG Wen-tung (7806/2429/2639)
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All of Chinese Traditional Medicine Teaching and Research Section of Shanghai First Medical College; coauthors of an article, "Clinico-Pathological Discussion -- Periodic Hemorrhage." (Peiping, Chung-i Tsa-chih /Chinese Traditional Medical Journal/, No 4, Apr 63, pp 16-18) (CONFIDENTIAL)

CH'EN Tsung-liang (7115/1350/5328)
CHAO Yu-ying (6392/3022/5391)

Coauthors of an article, "Investigation of Concentrated Gamma 666 by Direct Refrigeration." (Shanghai, Hua-hsueh Shih-chieh /Chemical World/, Vol 17, No 3, Mar 63, p 116) (CONFIDENTIAL)

CH'ENG Lien-fang (4453/6647/5364)
LI Chen (2621/2823)

Coauthors of an article, "Harmful Bacteria in Industry." (Shanghai, Hua-hsueh Shih-chieh /Chemical World/, Vol 17, No 5, May 63, pp 204-207)

CHIANG Pai-feng (5592/4102/0023)
CHIANG Chih-feng (5592/5267/7723)

Coauthors of an article, "Redistribution Reaction of Organic Silicon Monomers." (Shanghai, Hua-hsueh Shih-chieh /Chemical World/, Vol 17, No 4, Apr 63, pp 160-162) (CONFIDENTIAL)

CH'IEN Ch'ing-chi (6929/7230/2017), author of an article, "New Method of Synthesis for Nitro Furan Drugs." (Shanghai, Hua-hsueh Shih-chieh /Chemical World/, Vol 17, No 2, Feb 63, pp 74-75) (CONFIDENTIAL)

CHIN Chin-liang (6855/6651/5328), author of an article, "New Developments in Agrochemicals Containing Arsenic." (Shanghai, Hua-hsueh Shih-chieh /Chemical World/, Vol 17, No 3, Mar 63, pp 105-107) (CONFIDENTIAL)

CHIN Hsiung-kao (6855/7160/7559), author of an article, "The Situation in Research on Organic Tin in Agrochemicals." (Shanghai, Hua-hsueh Shih-chieh /Chemical World/, Vol 17, No 4, Apr 63, pp 155-159) (CONFIDENTIAL)

CHOU Fu-t'ien (0719/4395/3944), author of an article, "Test Manufacture of Weed Killer 3-Amino-1, 2, 4-Triazole." (Shanghai, Hua-hsueh Shih-chieh /Chemical World/, Vol 17, No 3, Mar 63, p 115) (CONFIDENTIAL)

CHOU Shao-ch'u (0719/4801/4342), Shanghai First Medical College
SHIH Chun-ch'ang (2457/3449/2490), Shanghai Municipal Public Expense Hospital

Coauthors of an article, "Preliminary Observations of the Efficacy of Short Course Piperazine Treatment for Pinworm Infection." (Peiping, Chung-hua I-hsueh Tsa-chih /National Medical Journal of China/, Vol 49, No 6, Jun 63, p 409) (CONFIDENTIAL)

CHOU Shou-shan (6855/1108/1472), author of an article, "On the Dialectics in 'Shang-han Lun (Treatise on Fevers)' /a classic on Chinese traditional medicine/." (Peiping, Chung-i Tsa-chih /Chinese Traditional Medical Journal/, No 3, Mar 63, pp 1-7) (CONFIDENTIAL)

CHU Ming-hua (2612/2494/5478), author of an article, "Coulomb Continuous Analysis." (Shanghai, Hua-hsueh Shih-chieh, Vol 17, No 3, Mar 63, pp 122-127) (CONFIDENTIAL)

CHUNG Mei-ch'uan (6945/2812/3123), author of an article, "A Case of Hyperthyroidism Corrected by Neural Stimulation Therapy (bunch needle therapy)." (Peiping, Chung-i Tsa-chih /Chinese Traditional Medical Journal/, No 3, Mar 63, p 19) (CONFIDENTIAL)

FANG Yao (2455/5069), author of an article, "Chemical Maintenance of Chemical Engineering Equipment." (Shanghai, Hua-hsueh Shih-chieh /Chemical World/, Vol 17, No 2, Feb 63, pp 85-89) (CONFIDENTIAL)

FU Yu-chen (0625/3768/2182), author of an article, "Research on Fluidized Bed to Dry Bicarbonate of Ammonia." (Shanghai, Hua-hsueh Shih-chieh /Chemical World/, Vol 17, No 2, Feb 63, pp 67-71) (CONFIDENTIAL)

HSING Jung-hui (1630/2837/6540), author of an article, "Design Computations and Calibration Methods for a Few Kinds of Common Nonstandard Choke Apparatus." (Shanghai, Hua-hsueh Shih-chieh /Chemical World/, Vol 17, No 4, Apr 63, pp 181-190) (CONFIDENTIAL)

HSIUNG Yun-chi (3574/6663/3444), author of an article, "Advances in the Sulfocyanic Method in the Synthesis of Isobornyl Thiocyanoacetate." (Shanghai, Hua-hsueh Shih-chieh /Chemical World/, Vol 17, No 5, May 63, p 224)

HUANG Tsai-lin (7806/0375/7792), author of an article, "A Sedimentation Type Propeller Centrifuge With Continuous Unloading of Dregs." (Shanghai, Hua-hsueh Shih-chieh /Chemical World/, Vol 17, No 3, Mar 63, pp 140-142) (CONFIDENTIAL)

HUA Yen-ling (5478/1693/7881)
CHU Ta-nien (2612/1129/1628)

Both associates in Acupuncture-Moxibustion, Lung-hua Hospital, Shanghai Chinese Traditional Medical College; "Appreciation of the Clinical Use of Chih-pien-hsueh /name of a site on the body used in acupuncture/," (Peiping, Chung-i Tsa-chih /Chinese Traditiona Medical Journal/, No 4, Apr 63, pp 23-24) (CONFIDENTIAL)

I Ta-nien (2496/1129/1628), author of an article, "Continuous Analysis of Gas Chromatography." (Shanghai, Hua-hsueh Shih-chieh /Chemical World/, Vol 17, No 5, May 63, pp 225-228)

JEN Hsin-min (0117/2450/3046)
CHU Yen-chu (2612/1693/1337)

Coauthors of an article, "Liquid Phase Hydrogenation Synthesis of Hexadiamine From Hexadinitrite Under Constant Pressure." (Shanghai, Hua-hsueh Shih-chieh /Chemical World/, Vol 17, No 4, Apr 63, pp 163-165) (CONFIDENTIAL)

KUAN Tzu-yuan (1351/5261/0337), author of an article, "New Method of Using Cobalt Nitrate to Determine Potassium Content." (Shanghai, Hua-hsueh Shih-chieh /Chemical World/, Vol 17, No 2, Feb 63, pp 79-80) (CONFIDENTIAL)

KUO Ch'i-chen (6753/1142/3791)
CHANG Liang-heng (1728/5328/0077)

Coauthors of an article, "Synthesis of O-(Carboxymethyl)-N, N-Dimethyl Ammonia -- Sulfur Substituted Formic Ether and Its Homologs." (Shanghai, Hua-hsueh Shih-chieh /Chemical World/, Vol 17, No 4, Apr 63, pp 168-170) (CONFIDENTIAL)

LEI Huan-ch'iang (7191/3562/1730)
WANG Mei-hsing (3769/3780/7451)

Coauthors of an article, "The Use of Nitric Mercury Reagents to Determine Iodine in Organic Matter." (Shanghai, Hua-hsueh Shih-chieh /Chemical World/, Vol 17, No 4, Apr 63, pp 180-181) (CONFIDENTIAL)

LI Ching-wei (2621/4842/4885), Medical History Research Laboratory, Research Institutes of Chinese Traditional Medicine; author of an article, "Summary of the History of Infectious Hepatitis." (Peiping, Chung-i Tsa-chih /Chinese Traditional Medical Journal/, No 4, Apr 63, pp 39-41) (CONFIDENTIAL)

LI Yu-ch'ang (2621/1635/2490), Chinese Traditional Medicine Teaching and Research Section, First Hospital of Kunming Medical College; author of an article "Report of Experiences in the Treatment of 23 Cases of Sexual Neurasthenia." (Peiping, Chung-i Tsa-chih /Chihese Traditional Medical Journal/, No 3, Mar 63, p 18)(CONFIDENTIAL)

LIU Ch'un-yuan (0491/2504/0337), author of an article, "Research on Catalytic Hydrogenation of Coal Tar and Crude Benzene Under Constant Pressure." (Shanghai, Hua-hsueh Shih-chieh /Chemical World/, Vol 17, No 4, Apr 63, pp 151-155) (CONFIDENTIAL)

LIU Yun-ch'ao (0491/0061/6389), associate in Otorhinolaryngology, Tsingtao Medical College Hospital; author of an article, "Diagnosis and Treatment of Meniere's Syndrome (Labyrinthine Hydrops) With Analysis of Thirty Cases." (Peiping, Chung-i Tsa-chih /Chinese Traditional Medical Journal/, No 4, Apr 63, pp 8-10)(CONFIDENTIAL)

LIU P'u-yuan (0491/2528/0337), T'ang-shan Municipal Chinese Traditional Medical Hospital; author of an article, "Clinical Analysis of 50 Cases of Ulcers Treated with 'Huang-ch'i Chien-chung T'ang' /a remedy containing astragalus and other ingredients/." Reportedly, the 50 cases of gastro-duodenal ulcers had been treated without success by practitioners of Western medicine. (Peiping, Chung-i Tsa-chih /Chinese Traditional Medical Journal/, No 3, Mar 63, pp 20-21)(CONFIDENTIAL)

LU P'ei-chang (0712/1014/3864), author of an article, "Internal Corrosion Problems in Synthesizing Tar With Ammonia." (Shanghai, Hua-hsueh Shih-chieh /Chemical World/, Vol 17, No 2, Feb 63, pp 82-84) (CONFIDENTIAL)

LU T'ien-hsin (7120/1131/9515), author of an article, "Report on Treatment for a Case of Postoperative Sinusitis." (Peiping, Chung-i Tsa-chih /Chinese Traditional Medical Journal/, No 4, Apr 63, p 20) (CONFIDENTIAL)

LU T'ien-hsiung (1686/1131/7160)
CHIEN Ta-p'an (6929/1129/2857)

Coauthors of an article, "Progress in Research on Tube Type Reactors." (Shanghai, Hua-hsueh Shih-chieh [Chemical World], Vol 17, No 3, Mar 63, pp 108-109) (CONFIDENTIAL)

MA Tzu-ch'uan (7456/5261/2938), author of an article, "Research on the Synthesis of Cebetox." (Shanghai, Hua-hsueh Shih-chieh [Chemical World], Vol 17, No 3, Mar 63, pp 110-111) (CONFIDENTIAL)

P'ENG Hai-ch'ing (1756/3189/0615), author of an article, "Beta-Propiolactone -- A Sterilizing Agent for Culture Mediums." (Shanghai, Hua-hsueh Shih-chieh [Chemical World], Vol 17, No 5, May 63, p 213)

PI K'o-lu (3968/0344/0188), author of an article, "The Use of Nitric Acid in the Decomposition of Phosphorous Rock to Obtain Nitrogen Phosphates and Nitrogen-Phosphorous-Potassium Fertilizers." (Shanghai, Hua-hsueh Shih-chieh [Chemical World], Vol 17, No 2, Feb 63, pp 62-65)(CONFIDENTIAL)

P'ING Ch'eng-fang (1627/2052/5302), author of an article, "New Method of Removing Sulfur by Synthetic Gas." (Shanghai, Hua-hsueh Shih-chieh [Chemical World], Vol 17, No 2, Feb 63, pp 58-61) (CONFIDENTIAL)

SHIH Ch'un-yuan (2457/2504/0954)
K'UNG Hsiang-ti (1313/4382/2769)
LIU Han-ming (0491/3352/2494)

Coauthors of an article, "Semi-Micro Analysis and Ordinary Analysis of Hydrogen in Petroleum Gas." (Shanghai, Hua-hsueh Shih-chieh [Chemical World], Vol 17, No 4, Apr 63, pp 181-183)(CONFIDENTIAL)

SHIH Hung-fan (4258/3163/4636), author of an article, "Experiment of Absorbing Benzine From Coal Gas Using Activated Carbon." (Shanghai, Hua-hsueh Shih-chieh [Chemical World], Vol 17, No 4, Apr 63, pp 171-172) (CONFIDENTIAL)

SHIH Wen-kuei (2457/2429/2710), author of an article, "The Use of Absorption Chromatography to Analyze Gamma 666." (Shanghai, Hua-hsueh Shih-chieh [Chemical World], Vol 17, No 4, Apr 63, pp 177-179) (CONFIDENTIAL)

T'AN Wen-pai (6151/2429/2672), author of an article, "Synthesis of 6-Carboxyl Quinoline." (Shanghai, Hua-hsueh Shih-chieh /Chemical World/, Vol 17, No 4, Apr 63, p 173)(CONFIDENTIAL)

T'ANG Kuei-hua (3282/2710/5478), author of an article, "Problems of Gaseous Purity Index and Corrosion in Transformation Systems in the Production of Sulfuric Acid." (Shanghai, Hua-hsueh Shih-chieh /Chemical World/, Vol 17, No 5, May 63, pp 208-212)

TENG Chia-ch'i (6772/1367/4388), author of an article, "Continuous Analysis of Capacity and Dielectric Constants." (Shanghai, Hua-hsueh Shih-chieh /Chemical World/, Vol 17, No 2, Feb 63, pp 76-78) (CONFIDENTIAL)

TI Kuang (5049/0342), author of an article, "The Manufacture of High Grade Straight Chain Alcohol and Alpha-Olefins." (Shanghai, Hua-hsueh Shih-chieh /Chemical World/, Vol 17, No 4, Apr 63, pp 147-150) (CONFIDENTIAL)

TS'AI Shu-lien (5591/3219/5571), author of an article, "New Developments in Homogeneous Precipitation Methods." (Shanghai, Hua-hsueh Shih-chieh /Chemical World/, Vol 17, No 3, Mar 63, pp 128-131) (CONFIDENTIAL)

TS'AO Chen-ch'in (2580/7201/3830)
LI Ch'un-ling (2621/2797/7881)
CH'U Tien-fu (0328/3013/4395)

Coauthors of an article, "Corrosive and Pressure Resistant Characters of Fermentation and Culture Ware." (Shanghai, Hua-hsueh Shih-chieh /Chemical World/, Vol 17, No 5, May 63, pp 238-241)

TSENG Ch'ing-hsu (2582/1987/2448)
TSENG Ch'eng-leng (2582/1987/2807)

Both of the Physiology Teaching and Research Section, Kunming Medical College; coauthors of an article, "Progress in Research on the Mechanism of Erythrocyte Sedimentation." (Peiping, Chung-hua I-hsueh Tsa-chih /National Medical Journal of China/, Vol 49, No 6, Jun 63, pp 398-401)(CONFIDENTIAL)

TS'ENG Hung (2582/1347), author of an article, "Phosphate Fertilizer Fused With Magnesium and Nickel Refining." (Shanghai, Hua-hsueh Shih-chieh /Chemical World/, Vol 17, No 2, Feb 63, pp 52-54) (CONFIDENTIAL)

TSOU Ts'ui-lun (6760/5488/0743), author of an article, "Technical Controls in the Production of Coal Gas." (Shanghai, Hua-hsueh Shih-chieh /Chemical World/, Vol 17, No 5, May 63, pp 215-219)

TUAN Sheng-fu (3008/3932/4395), Internal Medicine Teaching and Research Section, Second Hospital of Wuhan Medical College
TSU Hsi-pi (4371/1585/1732), Wuhan Tuberculosis Hospital

Coauthors of an article, "Pulmonary Myxoma." (Peiping, Chung-hua I-hsueh Tsa-chih /National Medical Journal of China/, Vol 49, No 6, Jun 63, p 367) (CONFIDENTIAL)

TUNG K'un-chen (5516/0981/6966), author of an article, "Investigation of Colorimetric Analyses of Coarse Protein in Food Products." (Shanghai, Hua-hsueh Shih-chieh /Chemical World/, Vol 17, No 5, May 63. pp 230-231)

TUNG Min-sheng (5516/3046/3932), Otorhinolaryngology Teaching and Research Section, Honan Medical College; author of an article, "Three Cases of Cystic Pleural Psammona in the Accessory Sinuses of the Nose." (Peiping, Chung-hua I-hsueh Tsa-chih /National Medical Journal of China/, Vol 49, No 6, Jun 63, pp 368-369) (CONFIDENTIAL)

WANG Cheng-yuan (3769/1767/0337)
SHIH Ta-hsi (2457/1129/6007)

Coauthors of an article, "New Approaches to the Production of Dinitro Powder." /Dinitro Powder is an abbreviated form of Thilocyano-2,4 Dinitro Benzene (2, 4 Erh-hsiao-chi-liu-ch'ing-tai-pen: 2,4 0059/4285/1015/4288/8642/0108/0058)./ (Shanghai, Hua-hsueh Shih-chieh /Chemical World/, Vol 17, No 3, Mar 63, pp 117-118) (CONFIDENTIAL)

WANG Ch'ing-t'ien (3769/1987/3944), author of an article, "Some Developments in Chemical Weed Killers." (Shanghai, Hua-hsueh Shih-chieh /Chemical World/, Vol 17, No 3, Mar 63, pp 99-104) (CONFIDENTIAL)

WANG Erh-hui (3769/1432/1920), author of an article, "The Use of Amino-benzoic Acid to Remove Gossypol From Prepressed Oil and Lixiviated Oil." (Shanghai, Hua-hsueh Shih-chieh /Chemical World/, Vol 17, No 2, Feb 63, pp 72-73) (CONFIDENTIAL)

WANG Erh-k'ang (3076/1422/1660), author of an article, "Chromatic Polarogram of Certain Ions." (Shanghai, Hua-hsueh Shih-chieh /Chemical World/, Vol 17, No 5, May 63, pp 229)

WANG Sheng-hui (3768/3932/6540), author of an article, "Oxidation-Reduction Method to Determine Nitrogen in Ammonium." (Shanghai, Hua-hsueh Shih-chieh /Chemical World/, Vol 17, No 2, Feb 63, p 81) (CONFIDENTIAL)

WANG I-lan (3769/4669/5695), author of an article, "The Poisonous Character of and Protection Offered by Organophosphorous Agrochemicals." (Shanghai, Hua-hsueh Shih-chieh /Chemical World/, Vol 17, No 3, Mar 63, pp 143-145) (CONFIDENTIAL)

WANG Yu-chih (3076/1635/5349), author of an article, "Air Flow Drying Apparatus." (Shanghai, Hua-hsueh Shih-chieh /Chemical World/, Vol 17, No 3, Mar 63, pp 135-139) (CONFIDENTIAL)

WU Cheng-yao (0702/2398/1031), author of an article, "Flow Method for Baking Alunite." (Shanghai, Hua-hsueh Shih-chieh /Chemical World/, Vol 17, No 2, Feb 63, pp 55-57) (CONFIDENTIAL)

WU Chi-tsu (0702/4949/4371), author of an article, "Humidity Continuous Analysis." (Shanghai, Hua-hsueh Shih-chieh /Chemical World/, Vol 17, No 4, Apr 63, pp 174-176) (CONFIDENTIAL)

YANG Ch'ing-hsien (2799/1987/6343), author of an article, "The Jet Sonic Machine and Its Application in Eliminating Foam." (Shanghai, Hua-hsueh Shih-chieh /Chemical World/, Vol 17, No 5, May 63, pp 234-236)

YU Ch'ang-hsing (0151/1603/5281)
LIU Ch'u-yun (0491/2806/0061)

Coauthors of an article, "Pentachlorophenol Weed Killers." (Shanghai, Hua-hsueh Shih-chieh /Chemical World/, Vol 17, No 5, May 63, pp 2002-30)

YU Chien-hsi (3266/1696/3556), Fu-an Special District Hospital, Fukien; author of an article, "A Study of Ch'uan-chen I-ch'i-t'ang /proprietary name of a remedy/ and Report of Its Use in Treatment of Three Cases of Measles." (Peiping, Chung-i Tsa-chih /Chinese Traditional Medical Journal/, No 4, Apr 63, pp 10-12) (CONFIDENTIAL)

YUAN T'ieh-piao (5913/6993/1753)
HO Ch'i-hsiang (0149/0796/4382)
CHANG Chia-jui (1728/1367/6904)
CH'EN Chi-sheng (7115/7467/5116)

Coauthors of an article, "The Manufacture of Alcohol From Yeast Produced in Sawdust Hydrolic Liquid." (Shanghai, Hua-hsueh Shih-chieh [Chemical World], Vol 17, No 5, May 63, pp 220-223)

LIST OF ACTAS SINICA

The following Actas Sinica (Hsueh-pao) are being published in Peiping.

	Title	Periodicity
1.	Ch'i-hsiang Hsueh-pao (Acta Meteorologica Sinica)	Quarterly
2.	Chieh-p'ou Hsueh-pao (Acta Anatomica Sinica)	Quarterly
3.	Chih-wu Hsueh-pao (Acta Botanica Sinica)	Quarterly
4.	Chih-wu Feng-lei Hsueh-pao (Acta Phytotaxonomica Sinica)	Quarterly
5.	Chih-wu Ping-li Hsueh-pao (Acta Phytopathologica Sinica)	Quarterly
6.	Chin-shu Hsueh-pao (Acta Metallurgica Sinica)	Quarterly
7.	Ch'u-mu Shou-i Hsueh-pao (Acta Veterinaria et Zootechnica Sinica)	Quarterly
8.	Hai-yang yu Hu-chao (Oceanologia et Limnologia Sinica)	Quarterly
9.	Hsin-li Hsueh-pao (Acta Psychologica Sinica)	Quarterly
10.	Hua-hsueh Hsueh-pao (Acta Chimica Sinica)	Bimonthly
11.	Ku-sheng-wu Hsueh-pao (Acta Palaeontologica Sinica)	Quarterly
12.	K'un-ch'ung Hsueh-pao (Acta Entomologica Sinica)	Bimonthly
13.	Li-hsueh Hsueh-pao (Acta Mechanica Sinica)	Quarterly
14.	Nung-yeh Chi-hsieh Hsueh-pao (Acta Agromechanica Sinica)	Quarterly
15.	Sheng-li Hsueh-pao (Acta Physiologica Sinica)	Quarterly
16.	Sheng-wu Hua-hsueh yu Sheng-wu Wu-li Hsueh-pao (Acta Biochimica et Biophysica Sinica)	Quarterly
17.	Shih-yen Sheng-wu-hsueh Hsueh-pao (Acta Biologiae Experimentalis Sinica)	Semiannual

	Title	Periodicity
18.	Shu-hsueh Hsueh-pao (Acta Mathematica Sinica)	Quarterly
19.	Shui-sheng Sheng-wu-hsueh Chi-k'an (Acta Hydrobiologica Sinica)	Semiannual
20.	Ti-chih Hsueh-pao (Acta Pedologica Sinica)	Quarterly
21.	Ti-ch'iu Wu-li Hsueh-pao (Acta Geophysica Sinica)	Semiannual
22.	Ti-li Hsueh-pao (Acta Geographica Sinica)	Quarterly
23.	Tien-tzu Hsueh-pao (Acta Electronica Sinica)	Quarterly
24.	T'ien-wen Hsueh-pao (Acta Astronomica Sinica)	Semiannual
25.	T'ien-wen Hsueh-pao Fu-k'an (Acta Astronomica Sinica Supplementum)	Semiannual
26.	Ts'e-hui Hsueh-pao (Acta Geodetica et Cartographica Sinica)	Quarterly
27.	T'u-jang Hsueh-pao (Acta Pedologica Sinica)	Quarterly
28.	Tung-wu Hsueh-pao (Acta Zoologica Sinica)	Quarterly
29.	Tzu-tung-hua Hsueh-pao (Acta Automatica Sinica)	Quarterly
30.	Wei-sheng-wu Hsueh-pao (Acta Microbiologica Sinica)	Quarterly
31.	Wu-li Hsueh-pao (Acta Physica Sinica)	Monthly
32.	Yao-hsueh Hsueh-pao (Acta Pharmaceutica Sinica)	Monthly
33.	Chi-hsieh Kung-ch'eng Hsueh-pao (Chinese Journal of Mechanical Engineering)	Quarterly
34.	Chih-wu Pao-hu Hsueh-pao (Chinese Journal of Plant Protection)	Quarterly
35.	Chien-chu Hsueh-pao (Journal of Architecture)	Monthly
36.	Kuei-suan-yen Hsueh-pao (Chinese Journal of Silicate)	Quarterly
37.	Shui-li Hsueh-pao (Chinese Journal of Hydraulic Engineering)	Bimonthly

	Title	Periodicity
38.	T'u-mu Kung-ch'eng Hsueh-pao (Chinese Journal of Civil Engineering)	Bimonthly

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Central Intelligence Agency

Washington, D.C. 20505

7 September 2004

Ms. Roberta Schoen
Deputy Director for Operations
Defense Technical Information Center
7725 John J. Kingman Road
Suite 0944
Ft. Belvoir, VA 22060

Dear Ms. Schoen:

In February of this year, DTIC provided the CIA Declassification Center with a referral list of CIA documents held in the DTIC library. This referral was a follow on to the list of National Intelligence Surveys provided earlier in the year.

We have completed a declassification review of the "Non-NIS" referral list and include the results of that review as Enclosure 1. Of the 220 documents identified in our declassification database, only three are classified. These three are in the Release in Part category and may be released to the public once specified portions of the documents are removed. Sanitization instructions for these documents are included with Enclosure 1.

In addition to the documents addressed in Enclosure 1, 14 other documents were unable to be identified. DTIC then provided the CDC with hard copies of these documents in April 2004 for declassification review. The results of this review are provided as Enclosure 2.

We at CIA greatly appreciate your cooperation in this matter. Should you have any questions concerning this letter and for coordination of any further developments, please contact Donald Black of this office at (703) 613-1415.

Sincerely,

Nancy [signature] for

Sergio N. Alcivar
Chief, CIA Declassification Center,
Declassification Review and Referral Branch

Enclosures:

1. Declassification Review of CIA Documents at DTIC (with sanitization instructions for 3 documents)
2. Declassification Status of CIA Documents (hard copy) Referred by DTIC (with review processing sheets for each document)

Processing of OGA-Held CIA Documents

The following CIA documents located at DTIC were reviewed by CIA and declassification guidance has been provided.

OGA Doc ID	Job Num	Box	Fldr	Doc	Doc ID	Document Title	Pub Date	Pages	Decision	Proc Date
AD0343932	78-03117A	213	1	18	5117	Scientific Information Report Chinese Science (34)	10/22/1963	89	Approved For Release	3/29/2004
AD0344702	78-03117A	214	1	21	5149	Scientific Information Report Chinese Science (35)	11/4/1963	133	Approved For Release	3/29/2004
AD0344965	78-03117A	215	1	4	5163	Scientific Information Report Chinese Science (36)	11/7/1963	133	Approved For Release	3/29/2004
AD0345229	78-03117A	215	1	23	5182	Scientific Information Report Chinese Science (37)	11/18/1963	179	Approved For Release	3/29/2004
AD0345750	78-03117A	216	1	20	5209	Scientific Information Report Chinese Science (38)	12/11/1963	174	Approved For Release	3/29/2004
AD0344419	78-03117A	217	1	20	5241	Scientific Information Report Chinese Science (39)	12/27/1963	75	Approved For Release	3/29/2004
AD0346493	78-03117A	218	1	21	5277	Scientific Information Report Chinese Science (40)	1/10/1964	115	Approved For Release	3/29/2004
AD0346725	78-03117A	219	1	27	5320	Scientific Information Report Chinese Science (41)	1/27/1964	78	Approved For Release	3/29/2004
AD0347051	78-03117A	220	1	25	5359	Scientific Information Report Chinese Science (42)	2/6/1964	78	Approved For Release	3/29/2004
AD0347849	78-03117A	221	1	39	5407	Scientific Information Report Chinese Science (43)	3/2/1964	174	Approved For Release	3/29/2004
AD0347929	78-03117A	222	1	25	5438	Scientific Information Report Chinese Science (44)	3/5/1964	104	Approved For Release	3/29/2004
AD0348352	78-03117A	223	1	20	5479	Scientific Information Report Chinese Science (45)	3/20/1964	117	Approved For Release	3/29/2004
AD0349491	78-03117A	225	1	18	5560	Scientific Information Report Chinese Science (46)	4/24/1964	118	Approved For Release	3/29/2004
AD0349657	78-03117A	225	1	34	5581	Scientific Information Report Chinese Science (47)	5/4/1964	98	Approved For Release	3/29/2004
AD0332751	78-03117A	183	1	29	3940	Scientific Information Report Electronics And Engineering (22)	10/19/1962	68	Approved For Release	3/29/2004
AD0333146	78-03117A	186	1	20	4041	Scientific Information Report Electronics And Engineering (23)	11/23/1962	73	Approved For Release	3/29/2004
AD0334103	78-03117A	188	1	37	4136	Scientific Information Report Electronics And Engineering (24)	12/20/1962	62	Approved For Release	3/29/2004
AD0334236	78-03117A	190	1	40	4217	Scientific Information Report Electronics And Engineering (25)	1/22/1963	48	Approved For Release	3/29/2004
AD0334769	78-03117A	193	1	39	4339	Scientific Information Report Electronics And Engineering (26)	2/28/1963	68	Approved For Release	3/29/2004
AD0335480	78-03117A	196	1	17	4436	Scientific Information Report Electronics And Engineering (27)	3/21/1963	95	Approved For Release	3/29/2004
AD0336306	78-03117A	199	1	2	4538	Scientific Information Report Electronics And Engineering (28)	4/25/1963	69	Approved For Release	3/29/2004
AD0332433	78-03117A	183	1	35	3946	Scientific Information Report Organization And Administration Of Soviet Science (5)	10/22/1962	60	Approved For Release	3/29/2004